

Fellrath, Isabelle (1998) A study of selected principles of international environmental law in the light of 'sustainable development'. PhD thesis, University of Nottingham.

Access from the University of Nottingham repository:

<http://eprints.nottingham.ac.uk/10983/1/285462.pdf>

Copyright and reuse:

The Nottingham ePrints service makes this work by researchers of the University of Nottingham available open access under the following conditions.

- Copyright and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners.
- To the extent reasonable and practicable the material made available in Nottingham ePrints has been checked for eligibility before being made available.
- Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.
- Quotations or similar reproductions must be sufficiently acknowledged.

Please see our full end user licence at:

http://eprints.nottingham.ac.uk/end_user_agreement.pdf

A note on versions:

The version presented here may differ from the published version or from the version of record. If you wish to cite this item you are advised to consult the publisher's version. Please see the repository url above for details on accessing the published version and note that access may require a subscription.

For more information, please contact eprints@nottingham.ac.uk

DEPARTMENT OF LAW



**A Study of Selected Principles
of
International Environmental Law
in the light of
'Sustainable Development'**



**Submitted by Isabelle Fellrath
for the Degree of Doctor of Philosophy
May 1998**

“ We're gettin to close to the edge
too many times I wake up scared
About a world that's out of hand
See the water turnin' black
You smell the air its gettin' hard to breathe
We ought to get down on our knees
and beg forgiveness for our greed

Proud, proud we've been so proud
of our advancement in the human race
Pushin' pullin' Nature Down
Never worried we'd run out
even at this deadly pace...”(1)

(1) The Havalinas, 'Good for nothin' rag', from *Havalinas*, Elektra, 1990; spelling as in original.

CONTENTS

<i>Abstract</i>	<i>vii</i>
<i>Acknowledgements</i>	<i>viii</i>
<i>Abbreviations</i>	<i>ix</i>
<i>Table of Cases</i>	<i>xiv</i>
<i>Table of Treaties</i>	<i>xxiv</i>
<i>Table of Declarations, Resolutions and other Relevant Documents</i>	<i>xxxviii</i>

CHAPTER ONE

INTRODUCTION

1. <u>Introduction</u>	1
2. <u>General Framework of Research</u>	3
i. Conceptual Framework.....	3
ii. Approach and Methodology	17
iii. Legal Framework.....	21
iv. Terminological Clarifications	38
3. <u>Evolutionary Perspective of Sustainable Development</u>	39
i. Sustainable Development and Equilibrium State	39
ii. Environment versus Development.....	42
iii. Sustainable Development.....	46

CHAPTER TWO

TERRITORIAL INTEGRITY, SOVEREIGNTY AND PERMANENT SOVEREIGNTY OVER NATURAL RESOURCES

1.	<u>Introduction</u>	53
2.	<u>Objects of Permanent Sovereignty: From Mineral Resources to Environmental Policy</u>	56
i.	Sovereign Control over, and Exploitation of Mineral Resources and Other Natural Assets.....	56
ii.	Sovereignty over Economic Assets and Policy in a New International Economic Order.....	63
iii.	Sovereignty over Environmental Resources and Environmental Policies versus Globalisation of Environmental Standards and Policies.....	68
3.	<u>The Principle of Permanent Sovereignty over Natural Resources: a Principle of Customary Law</u>	87
4.	<u>Permanent Sovereignty over Natural Resources: Limits and Constraints</u>	92
i.	Classic Conception of Absolute and Unlimited Sovereignty.....	92
ii.	Towards a Limited Sovereignty over Natural Resources.....	96
a.	<i>Equitable Utilisation, Sic Utere Tuo and Related No Substantial Transboundary Harm Principles</i>	97
b.	<i>Limits Flowing from General International Law</i>	105
c.	<i>Limits Arising from General Environmental Considerations</i>	107
5.	<u>Concluding Comments</u>	114

CHAPTER 3

PREVENTION AND PRECAUTIONARY PRINCIPLES

1.	<u>Introduction</u>	118
----	---------------------------	-----

2.	<u>Origins of the Concept</u>	120
i.	Vorsorgeprinzip and Precautionary Principle.....	120
ii.	Precaution as a Principle of International Law	122
a.	Equitable Apportionment and No Substantial Harm Principles	122
b.	The 1972 Stockholm Declaration on the Human Environment: Institutionalisation of Prevention.....	125
c.	Precaution and Sustainable Development	131
iii.	Status of Precautionary Principle under International law	139
3.	<u>Constitutive Elements of a Precautionary Principle</u>	148
i.	Object of Precaution	148
ii.	Risk-Harm to be Averted/Minimised	149
iii.	Causality Link Between the Object and the Harm/Risk.....	153
4.	<u>Operational Implications of the Precautionary Principle</u>	156
i.	Unilateral Duty of Due Diligence	156
ii.	Prior Information, Notification and Consultation.....	157
iii.	Prior Environmental Impact Assessment	164
5.	<u>Limits Inherent in the Precautionary Principle</u>	169
i.	Financial and Technical Limits.....	170
ii.	Preservation of Incentives.....	174
6.	<u>Concluding Comments</u>	177

CHAPTER FOUR.

INTERGENERATIONAL EQUITY: A BASIS FOR A PLANETARY TRUST

1.	<u>Introduction</u>	179
2.	<u>Environmental Fairness</u>	184
i.	Generalities on the Institution of Trust in English Law	186
ii.	Elements of a Planetary Trust	191
a.	Framework Criteria	192

b.	Basic Principles.....	193
c.	Planetary Rights and Obligations.....	194
iii.	Intergenerational Equity as a Normative Framework for Sustainable Development.....	196
3.	<u>Major Shortcomings of the Planetary Trust Theory</u>	198
i.	Moral Foundations for Planetary Rights and Obligations: the Moral Sense of Obligations to Future Generations	199
ii.	Legal Basis for a Planetary Trust: Intergenerational Equity as a Fundamental Principle Deeply Rooted in International Law.....	201
iii.	Operational Implications of a Planetary Trust.....	209
iv.	Pertinence of the Planetary Trust Theory to Preserve a Certain Quality Environment	214
4.	<u>Beyond the Rhetoric of a Planetary Trust: Intergenerational Equity as an Inspirational Principle of Modern International Environmental Law</u>	216

CHAPTER FIVE.

PRINCIPLE OF PARTNERSHIP: ASSISTANCE, CO-OPERATION AND CO- ORDINATION RECONSIDERED

1.	<u>Introduction</u>	220
2.	<u>Partnership in National and International Law</u>	225
i.	Domestic Institution of Partnership: the English Example.....	225
ii.	Partnership-like Concept in International Law: the Case of the Common Heritage of Mankind	230
iii.	Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership.....	234
iv.	Common Concern, Common Interest of Mankind: Global Partnership or Global Bargain?	243
3.	<u>The Parameters for Global Co-operation</u>	248

i.	Financial Assistance: Additionality and Compensation.....	252
ii.	Transfer of Technology	256
iii.	Common But Differentiated Responsibility.....	259
4.	<u>The Terms of the Bargain</u>	261
5.	<u>Conclusions: Regional Environmental Partnerships, Global Bargain, and International Co-ordination</u>	272

CHAPTER 6.

PRINCIPLES PERTAINING TO PUBLIC PARTICIPATION IN INTERNATIONAL ENVIRONMENTAL LAW AND POLICY

1.	<u>Introduction</u>	278
2.	<u>Individuals in General International Law</u>	283
3.	<u>Towards a More Holistic Approach to International Environmental Law: the Environment-Human Rights Law Dimension</u>	286
i.	Use of Human Rights Procedures to Preserve Individual Environmental Interests	292
ii.	Towards a More Effective Exploitation of Human Rights Mechanisms to Preserve Individual Environmental Interests.....	300
iii.	Strength and Weakness of the Human Rights Mechanisms in Protecting Environmental Interests.....	305
4.	<u>Women Participation and Women Interests Clauses in Environmental Documents: Desirable or Regrettable Evolution?</u>	311
i.	Origins of Women Participation and Women Interests Clauses: Evolution in the Perception of Women's Role at the International Level. Recognition of Women's Role in Economic Development.....	319
ii.	Women and the Environment.....	323
iii.	Advancement of Women to Protect the Environment, or Protection of the Environment to Enhance the Advancement of Women?	328

5.	<u>Conclusions: Satisfaction of Human Rights, Advancement of Women, Promotion of Development, and Protection of the Environment: Related, Parallel but Distinct Processes</u>	330
----	---	-----

CHAPTER SEVEN

EVALUATION OF SUSTAINABLE DEVELOPMENT AS A FRAMEWORK PRINCIPLE OF INTERNATIONAL ENVIRONMENTAL LAW

1.	<u>Introduction</u>	332
2.	<u>Sustainable Development from the Perspective of International Environmental Law: Synthesis of the Research</u>	333
3.	<u>Gabcikovo-Nagymaros Case: Judicial Consecration of Sustainable Development?</u>	337
4.	<u>Concluding Remarks</u>	341

BIBLIOGRAPHY

1.	<u>Papers & Periodicals</u>	343
2.	<u>Books & Theses</u>	406
	i. Books.....	406
	ii. Ph.D Dissertations.....	421
3.	<u>Documentary Sources</u>	422
	i. Main Secondary Sources of International Environmental Law Instruments.....	422
	ii. Analytical Tools	423
	iii. Bibliographies	423



Abstract

Since the late 1980s, the terms of 'sustainable development' have been frequently referred to both in international environmental law instruments and in the doctrine. In spite of such references, however, sustainable development has remained poorly developed in terms of its meaning and of its practical and normative implications.

This thesis purports to come out with a partial picture of what sustainable development means (or does not mean) in the restricted context of international environmental law. To do so, it will try to identify in which respect and how far sustainable development has influenced and has been reflected in the evolution of some selected principles of that law. Each principles is considered in an evolutionary perspective, from the time of its inception to the time of its 'association' to sustainable development.

Acknowledgements

After over three years of research, this thesis comes as a relief; and one would like to thank the whole world for it. My gratitude goes first to Catherine Jean Redgwell, for her constant support and availability, and for her precious advice throughout the research, and to Professor Jacques-Michel Grossen, for his careful reading of the first draft of the thesis. I also would like to acknowledge Mr Jean-Luc Duport, for his admirable patience with the 'computer' aspects of the thesis.

On a more personal level, there are no right words I could use to thank my family, and more particularly my mother, Francine Fellrath, for her trust, encouragement and generosity, and without whom my four-year stay in England would never have been possible. I am also beholden to my friends in Nottingham and in Switzerland, more particularly to Tarcisio Gazzini, Nikolas Tsagourias, Jörg Seifert, Laurent Vuarraz, Graziella Leite Piccolo and Olga Popovic, for tolerating my fluctuations of mood according to the progresses and regresses of the research.

Part of the research was funded by the Fonds national suisse de la recherche scientifique.

To † Jean Fellrath and † Professor Philippe Bois

Abbreviations

<i>AFDI</i>	Annuaire Français de Droit International
<i>Ann.IDI</i>	Annuaire de l'Institut de Droit International
<i>AJIL</i>	American Journal of International Law
Art.	Article
<i>ASDI</i>	Annuaire Suisse de Droit International/ Schweizerisches Jahrbuch für Internationales Recht; from 1991/Vol. 48 onwards Schweizerisches Zeitschrift für Internationales & Europäisches Recht
<i>ASIL Proc.</i>	Proceedings of the American Society of International Law
<i>AVR</i>	Archiv des Völkerrechts
<i>Birnie & Boyle</i>	Birnie & Boyle, <i>International Law & the Environment</i> (Oxford University Press, 1992)
BISD	Basic Instruments and Selected Documents (GATT)
Brownlie, <i>Principles</i>	Brownlie, <i>Principles of Public International Law</i> , 4 th edn (Oxford University Press, 1990)
BSE	Bovine Spongiform Encephalopathy (Mad Cow Disease)
Burhenne & Jahnke, <i>International Environmental Soft Law</i>	Burhenne & Jahnke, <i>International Environmental Soft Law, Collection of Relevant Documents</i> (Kluwer Law International, 1993-pres.)
Caldwell, <i>International Environmental Policy</i>	Caldwell, <i>International Environmental Policy</i> , 2 nd edn, (Duke University Press, 1990)
<i>Canadian Bar Rev.</i>	Canadian Bar Review
CFCs	chlorofluorocarbons
Chap.	Chapter
<i>CMLR</i>	Common Market Law Report
<i>Colorado JIELP</i>	Colorado Journal of International Environmental Law & Policy
<i>Columbia JTL</i>	Columbia Journal of Transnational Law

<i>Denver JILP</i>	Denver Journal of International Law & Policy
<i>Department of State Bulletin/Dispatch</i>	United States Department of State Bulletin (until Vol. 89 (1989) ; from 1990 inclusive (Vol.1) : United States Department of State Dispatch
Dixon & McCorquodale, <i>Cases & Materials D&R</i>	Dixon & McCorquodale, <i>Cases & Materials on International Law</i> , 2 nd edn (Blackstone, 1995)
<i>DVBl.</i>	Decisions and Reports of the Commission of the European Convention on Human Rights Deutsche Verwaltungsblatt
EC	European Community
<i>ECBull.</i>	Bulletin of the European Communities
EEC	European Economic Community
<i>EELR</i>	European Environmental Law Review
<i>Ecology LQ</i>	Ecology Law Quarterly
<i>ECR</i>	European Court Reports
<i>ECHR</i>	European Convention on Human Rights
ECHR Commission/Court	Commission/Court of the European Convention on Human Rights
<i>EHRR</i>	European Human Right Reports
<i>EHRLR</i>	European Human Rights Law Review
<i>EJIL</i>	European Journal of International Law
<i>ELR</i>	European Law Review
<i>EPL</i>	Environmental Policy & Law
<i>EPLJ</i>	Environmental & Planning Law Journal
EU	European Union
FIELD	Foundation for International Environmental Law & Development
FRG	Federal Republic of Germany
GAOR	United Nations General Assembly Official Records
<i>Georgetown IELR</i>	Georgetown International Environmental Law Review
Harris, <i>Cases & Materials</i>	Harris, <i>Cases and Materials on International Law</i> , 4 th edn (Sweet & Maxwell, 1991)
<i>Harvard ELR</i>	Harvard Environmental Law Review
<i>HRLJ</i>	Human Rights Law Journal
Hohmann (ed.), <i>Basic Documents</i>	Hohmann (ed.), <i>Basic Documents of International Environmental Law</i> 3 volumes (Graham & Trotman, 1992)

<i>ICLR</i>	International & Comparative Law Review
<i>ICJ Rep.</i>	Reports of the International Court of Justice
IDI	Institut de Droit International
<i>IEA</i>	International Environmental Affairs
IELMT	Burhenne (ed.), <i>International Environmental Law : Multilateral Treaties</i> (Verlag Schmidt, 1974-pres.)
<i>IJECL</i>	International Journal of Estuarine and Coastal Law
<i>IJ Marine & Coastal L</i>	International Journal of Marine and Coastal Law
ILA	International Law Association
<i>ILJ</i>	International Law Journal
<i>ILM</i>	International Legal Materials
<i>ILR</i>	International Law Reports
<i>Indian YbIA</i>	Indian Yearbook of International Affairs
IUCN	The World Conservation Union
IWC	International Whaling Commission
<i>JDI</i>	Journal du Droit International
<i>JED</i>	The Journal of Environment and Development
<i>JEL</i>	Journal of Environmental Law
<i>JIA</i>	Journal of Affairs
<i>JICL</i>	Journal of International & Comparative Law
<i>JIL</i>	Journal of International Law
<i>JWT</i>	Journal of World Trade (until 1987/Vol. 21 inclusive : Journal of World Trade Law, <i>JWTL</i>)
<i>Keesing's</i>	Keesing's Archives of Contemporary Events
Kiss & Shelton, <i>Traité de Droit Européen</i>	Kiss & Shelton, <i>Traité de Droit Européen de l'Environnement</i> (Frison-Roche, 1995)
Kiss & Shelton, <i>International Environmental Law</i>	Kiss & Shelton, <i>International Environmental Law</i> (Transnational Publishers, 1991)
Kiss & Shelton, <i>International Environmental Law, 1994 Suppl.</i>	Kiss & Shelton, <i>International Environmental Law, Supplement</i> , (Transnational Publisher, Ardsley-on-Hudson, 1994)
<i>LNTS</i>	League of Nations Treaty Series
<i>LR</i>	Law Review
<i>Millennium</i>	Millennium : Journal of International Studies
Misc.	UK Command Papers, Miscellaneous Series
<i>MPBull.</i>	Marine Pollution Bulletin

NGO	Non Governmental Organisation
<i>Quoc Dinh: Droit International Public</i>	Daillier & Pellet revised edition of Nguyen Quoc Dinh, <i>Droit International Public</i> 5 th edn (LGDJ, 1994)
<i>NILQ</i>	Northern Ireland Legal Quarterly
<i>NRJ</i>	Natural Resources Journal
<i>Netherlands ILR</i>	Netherlands International Law Review
<i>Nederlands TIR</i>	Nederlands Tijdschrift voor Internationaal Recht
<i>ODIL</i>	Ocean Development and International Law
<i>OCM</i>	Ocean & Coastal Management ; originally <i>Ocean Management</i> ; from Vol. 11 (1988) to 16 (1991) incl. : <i>Ocean & Shoreline Management</i> ; from Vol. 17 (1992) onward : <i>Ocean & Coastal Management</i>
OECD	Organisation for Economic Co-operation & Development
OECD DAC	OECD Development Assistance Committee
<i>OJEC</i>	Official Journal of the European Communities
<i>Oppenheim's International Law</i>	Jennings & Watts, <i>Oppenheim's International Law</i> , 9 th edn (Longman, 1992), unless specified otherwise
<i>ÖZöR</i>	Österreichisches Zeitschrift für Öffentliches Recht, from 1977 (Vol. 28) to 1990 (Vol. 41): Österreichisches Zeitschrift für öffentliches und Völkerrecht (<i>ZöVr</i>), and from Vol. 42 (1991), Austrian Journal of Public & International Law (<i>Austrian JPIL</i>)
Para.	Paragraph
<i>PCIJ Rep.</i>	Reports of the Permanent Court of International Justice
Pt.	Part
<i>RBDI</i>	Revue Belge de Droit International
<i>RdC</i>	Recueil des Cours
<i>RECIEL</i>	Review of European Community & International Environmental Law
Res.	Resolution
<i>RGDIP</i>	Revue Générale de Droit International
<i>RIAA</i>	Report of International Arbitration Awards
Rüster & Simma	Rüster & Simma (eds.), <i>International Protection of the Environment, Treaties and Related Documents</i> (Oceana, 1975-1983)
Rüster & Simma 2nd	Rüster & Simma (eds.), <i>International Protection of the Environment, Treaties and Related Documents</i> , Second Series (Oceana, 1994-pres.)

<i>San Diego LR</i>	San Diego Law Review
Sands, <i>Principles</i> (Vol. I)	Sands, <i>Principles of International Environmental Law</i> , Volume I (Manchester University Press, 1995)
Sands, <i>Principles</i> (Vol. IIA/IIB)	Sands <i>et al.</i> (eds.), <i>Principles of International Environmental Law : Documents in International Environmental Law</i> , Volume IIA/IIB, (Manchester University Press, 1994)
Sands, <i>Principles</i> (Vol. III)	Sands <i>et al.</i> (eds.), <i>Principles of International Environmental Law : Documents in European Community Environmental Law</i> , Volume III (Manchester University Press, 1995)
Sect.	Section
<i>Suffolk TLJ</i>	Suffolk Transnational Law Journal; from Vol.16 (1992/1993) onwards : Suffolk Transnational Law Review, <i>Suffolk TLR</i>
<i>Temple ICLJ</i>	Temple International & Comparative Law Journal
UAE	United Arab Emirates
UK	United Kingdom
UKTS	United Kingdom Treaty Series
UN	United Nations
UNCED Report	Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992 (3 Volumes) ; A/CONF.151/26/Rev.1.
UNCLOS	United Nations Convention on the Law of the Sea, 1982
UNCTAD	United Nations Conference on Trade & Development
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNGA	United Nations General Assembly
UNIDO	United Nations Industrial Development Organization
US	United States of America (also : American)
UNTS	United Nations Treaty Series
<i>Vanderbilt JTL</i>	Vanderbilt Journal of Transnational Law
Vol.	Volume
WB	World Bank
WCED	World Commission on Environment and Development
WCED/EG	Experts Group of the WCED
<i>YbIEL</i>	Yearbook of International Environmental Law
<i>YbIL</i>	Yearbook of International Law
<i>YbILC</i>	Yearbook of International Law Commission
<i>Yale LJ</i>	Yale Law Journal
<i>ZaöRV</i>	Zeitschrift für Ausländisches und Öffentliches Recht und Völkerrecht

Table of cases

International Arbitrations

- Alabama Claims* arbitration (1872), 4 Moore *International Arbitrations*, 4144.
- Pacific Fur Seals* arbitration (1893), 1 Moore *International Arbitrations*, 755.
- North Atlantic Coast Fisheries* case (UK v. US) (1910), XI *RIAA*, 167.
- Tacna-Arica* arbitration (Chile v. Peru) (1922), II *RIAA*, 921.
- Island of Palmas* arbitration (Netherlands-US) (1928), II *RIAA*, 829.
- Goldenberg* case (Germany v. Romania) (1928), II *RIAA*, 901.
- Railway Traffic Between Lithuania and Poland* case (1931), *PCIJ Series A/B*, No. 42.
- Trail Smelter* arbitration (US v. Canada); Final Award, III *RIAA* (1936), 1965; reproduced in 33 *AJIL* (1939) 182, and 35 *AJIL* (1941), 684 (Final Award).
- Lac Lanoux* arbitration (Spain v. France) (1957), XII *RIAA*, 281; reproduced in 24 *ILR* (1957), 101 (English), and 62 *RGDIP* (1958), 79.
- The *Gut Dam* arbitration (Canada-US) (1968), 8 *ILM* (1969), 118.
- Sociedad Minera el Teniente SA v. Norddeutsche Affinerie AG* (1973), 73 *ILR* (1987), 230.
- BP Exploration Co (Libya) Ltd v. Astro Protector Compania Naviera SA, Sincat, & National Oil Corp. LAR* (1973), 77 *ILR* (1988), 543.
- BP Exploration Co (Libya) Ltd v. Government of Libyan Arab Republic* (1973 and 1974) (BP case), 53 *ILR* (1979), 297.
- Anaconda Co v. Overseas Private Investment Corp.* (1975), 59 *ILR* (1980), 406.
- Texaco Overseas Petroleum Co & California Asiatic Oil Co v. Government of Libyan Arab Republic* (1975 and 1977) (*Topco* case), 53 *ILR* (1979), 389; 17 *ILM* (1978), 1.

Texaco Overseas Petroleum Co & California Asiatic Oil Co v. Montedison, Libyan National Oil Corp. & Viltanelle Etablissement (1976), 77 ILR (1988), 584.

Libyan American Oil Co v. Government of Libyan Arab Republic (1977) (*Liamco case*), 62 ILR (1982), 140.

Case Concerning the Air Services Agreement, of 27 March 1946 Between the United States of America and France (1978), XVII RIAA, 417.

AGIP Co v. Popular Republic of the Congo (1979), 21 ILM (1982), 726.

Benvenuti & Bonfant v. Popular Republic of the Congo (1980), 21 ILM (1982), 740.

Government of the State of Kuwait v. American Independent Oil Co (Aminoil) (1982), 21 ILM (1982), 976.

Amco Asia Corp. & Others v. the Republic of Indonesia (1983), 89 ILR (1992), 366.

Dispute Concerning the Delimitation of the Maritime Boundary (Guinea v. Guinea-Bissau) (1985), 25 ILM (1986), 252.

Oil Field of Texas Inc. v. The Government of the Islamic Republic of Iran, National Iranian Oil Co (1986), Iran-US Claims Tribunal, Chamber 1, reproduced in 21 *JWTL* (1987), 107.

PCIJ⁽¹⁾

The S.S. "Wimbledon", PCIJ Series A, No. 1, August 17th, 1923.

German Settlers in Poland, PCIJ Series B, No 6, September 10th, 1923.

The Mavrommatis Jerusalem Concessions, PCIJ Series A-No 5, March 26th, 1925.

Case Concerning Certain German Interests in Polish Upper Silesia (The Merits), PCIJ Series A-No 7, May 25th, 1926.

Case Concerning the Factory at Chorzów (Claim for Indemnity) (Jurisdiction), PCIJ Series A-No 9, September 7th, 1927.

The Case of the S.S. "Lotus", PCIJ Series A-No 10, September 7th, 1927.

Railway Traffic Between Lithuania and Poland (Railway Sector Landwarów-Kaisiadorys), PCIJ Series A/B, Fascicule No 42, Advisory Opinion of October 15th, 1931.

Lighthouses Case Between France and Greece, PCIJ Series A/B, Fascicule No 62, Judgment of March 17th, 1934.

(1) The thesis follows PCIJ and ICJ's official citation.

Case Relating to the Territorial Jurisdiction of the International Commission of the River Oder, PCIJ Series A-No 23.

Appeal From a Judgment of the Hungaro-Czechoslovak Mixed Arbitral Tribunal, (The Peter Pázmány University v. the State of Czechoslovakia), PCIJ Series A/B, Fascicule No 61, Judgment of December 15th, 1933.

Lighthouses Case Between France and Greece, PCIJ Series A/B, Fascicule No 62, Judgment of March 17th, 1934.

The Diversion of Water from the Meuse, PCIJ Series A/B, Fascicule No 70, Judgment of June 28th, 1937.

ICJ

Corfu Channel case, Judgment of April 9th 1949: ICJ Reports 1949, 4.

International status of South-West Africa, Advisory opinion: ICJ Reports 1950, 128.

Colombian-Peruvian Asylum case, Judgment of November 20th, 1950: ICJ Reports 1950, 266.

Fisheries case, Judgment of December 18th, 1951: ICJ Reports 1951, 116.

Reservations to the Convention on Genocide, Advisory opinion: ICJ Reports 1951, 15.

Anglo-Iranian Oil Co. case (Jurisdiction), Judgment of July 22nd, 1952: ICJ Reports 1952, 93.

Case concerning the Rights of nationals of the United States of America in Morocco, Judgment of August 27th, 1952: ICJ Reports 1952, 176.

Case concerning Right of Passage over Indian Territory (Merits), Judgment of 12 April 1960: ICJ Reports 1960, 6.

South West Africa Cases (Ethiopia v. South Africa, Liberia v. South Africa), Preliminary Objections, Judgment of 21 December 1962: ICJ Reports 1962, 319.

Case concerning the Northern Cameroons (Cameroon v. United Kingdom), Preliminary Objections, Judgment of 2 December 1963: ICJ Reports 1963, 15.

South West Africa, Second Phase, Judgment, ICJ Reports 1966, 6.

North Sea Continental Shelf, Judgment, ICJ Reports 1969, 3.

Barcelona Traction, Light and Power Company, Limited, Judgment, ICJ Reports 1970, 3.

Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa), notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, ICJ Reports 1971, 16.

Fisheries Jurisdiction (United Kingdom v. Iceland, Federal Republic of Germany v. Iceland), Jurisdiction of the Court, Judgment, ICJ Reports 1973, 3; Merits, ICJ Reports 1974, 3.

Nuclear Tests (Australia v. France), Interim Protection, Order of 22 June 1973, ICJ Reports 1973, 99.

Nuclear Tests (Australia v. France), Judgment of 20 December 1974, ICJ Reports 1974, 253.

Western Sahara, Advisory Opinion, ICJ Reports 1975, 12.

Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America), Merits, Judgment, ICJ Reports 1986, 14.

Certain Phosphates Lands in Nauru (Nauru v. Australia), Preliminary Objections, Judgment, ICJ Reports 1992, 240.

Maritime Delimitation in the Area between Greenland and Jan Mayen, Judgment, ICJ Reports 1993, 38.

Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case, ICJ Reports 1995, 288; reproduced in 36/2 Indian JIL (1996), 85 and 36/3 Indian JIL (1996), 77.

East Timor (Portugal v. Australia), Judgment, ICJ Reports 1995, 90; 34 ILM (1995), 1581.

Legality of the Use by a State of Nuclear Weapons in Armed Conflict, Advisory Opinion, ICJ Reports 1996, 66; 35 ILM (1996), 809.

Case concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, 25 September 1997, General List, No. 92; available with all dissenting and separate opinions on the ICJ Web Site @ <<http://www.icj-cij.org>>; text of the judgment and dissenting and separate opinions made in English reproduced in 37 ILM (1998), 162.

Free Trade Agreement Panel Decisions

Gatt Panel Report in the matter of *US-Prohibition of Imports of Tuna and Tuna Products from Canada* (1982), BISD/29th Supplement/91.

Gatt Panel Report in the matter of *Canada-Measures Affecting Import of Unprocessed Herring and Salmon* (1988), BISD/35th Supplement/98, noted at 27 ILM (1988), 1599.

Canada-US Free Trade Agreement Panel Report in the matter of *Canada-Landing Requirements for Pacific Coast Salmon and Herring* (1989), 30 *ILM* (1991), 181.

First Gatt Panel Report in the matter of *US-Restrictions on Imports of Tuna* (1991), GATT/DS21/R, 30 *ILM* (1991), 1594 (referred as Tuna/Dolphin I).

Second Gatt Panel Report in the matter of *US-Restrictions on Imports of Tuna* (1994), 33 *ILM* (1994), 839 (referred as Tuna/Dolphin II).

WTO Panel Report in the matter of *US-Standards for Reformulated and Conventional Gasoline*, WT/DS2/R, 29 January 1996; upheld by the WTO Appellate Body, WT/DS2/AB/R, 20 May 1996, 35 *ILM* (1996), 603.

WTO Appellate Body Report in the matter of *EC Measures Concerning Meat and Meat Products (Hormones)*, WT/DS26/AB/R, WT/DS48/AB/R 16 January 1998; available on the WTO Web Site @ <<http://www.wto-org>>.

European Community Cases

EEC Joined Cases 21-24/72, *International Fruit Co. v. Produktschap voor Groenten en Fruit*, [1972] *ECR* I-1226.

EEC Case C-169/89, *Criminal Proceedings against Gourmetteria Van Den Burgh (Red Grouses case)*, [1990] *ECR* I-143.

EEC Case C-302/86, *Commission v. Denmark (Danish Bottles case)*, [1989] 1 *CMLR*, 619.

EEC Case C-331/88, *The Queen v. The Minister of Agriculture, Fisheries and Food and the Secretary of State for Health, ex parte Fedesa and Others*, [1990] *ECR* I-4023.

EEC Joined Cases C-6/90 & 9/90, *Francovich v. Italy*, [1991] *ECR* I-5987.

EEC Case C-431/92, *Commission v. FRG (Grosskrotzenburg case)*, [1995] *ECR* I-2189.

EEC Case C-379/92, *Criminal Proceedings against Matteo Peralta (Peralta case)*, [1994] *ECR* I-3453.

EC Case C-133/94, *Commission v. Belgium*, not yet published; reported in 5 *EELR* (1996), 216.

EC Case T-194/94, *John Carvel and Guardian Newspapers Ltd v. Council of the European Union*, not yet published; reported in 5 *EELR* (1996), 23.

EC Case C-72/95, *Aannemersbedrijf P.K. Kraaijeveld BV et al. v. Gedeputeerde Staten van Zuid-Holland*, [1996] *ECR* I-5403, reported in 6 *RECIEL* (1997), 88.

EC Case T-219/95R, *Danielsson and Others v. Commission*, [1995] *ECR* II-3052; reproduced in 17 *HRLJ* (1996), 453.

European Convention on Human Rights Cases

(a) ECHR Commission

Dr S. v. FRG, Application 715/60, 5 August 1960 (unpublished).

Government of the Federal Republic of Austria against the Government of the Republic of Italy, Application 788/60, 11 January 1961, *Yb European Convention on Human Rights* (1961), 116.

X & Y v. FRG, Application 7407/76, 5 *D&R* (1976), 161.

Assoc. X v. UK, Application 7154/75, 14 *D&R* (1979), 31.

E.A. Arrondelle v. UK, Application 7889/77, 19 *D&R* (1980), 186 (admissibility), and 26 *D&R* (1982), 5 (friendly settlement).

G. & E. v. Norway, Joined Application 9278/81 and 9415/81, 35 *D&R* (1984), 30.

Braggs v. UK, Application 9310/81, 44 *D&R* (1985), 13 (admissibility) and 52 *D&R* (1987), 29 (friendly settlement).

Herrick v. UK, Application 11185/84, 42 *D&R* (1985), 275.

N. v. Austria, Application 10395/83, 48 *D&R* (1986), 65.

Z. v. Austria, Application 10392/83, 56 *D&R* (1988), 13.

Vearncombe et al. v. UK and FRG, Application 12816/87, 59 *D&R* (1989), 186.

S. v. France, Application 13728/88, 65 *D&R* (1990), 250.

Anna Maria Guerra and 39 Others v. Italy, Application 14967/89, 6 July 1995, noted at 38 *YbECHR* (1995), 202, and at 7 *YbIEL* (1996), 85; to be published in full in the forthcoming *D&R* 1998; French version available on the ECHR Court Web Site @ <<http://www.dhcour.coe.fr>>.

McGinley & Egan v. UK, Application 21825/93 and 23414/94, 28 November 1995, 21 *EHR* (1996), *Commission Supplement*, 56.

Taura et al. v. France, Application 28204/95, 83 *D&R* (1995), 112; reproduced in 18 *Revue Universelle de Droits de l'Homme* (1996), 315.

Greenpeace Schweiz et al. v. Switzerland, Application 27644/95, reproduced in 18 *HRLJ* (1997), 164.

(b) ECHR Court

Case Relating to Certain Aspects of the Laws on the Use of Languages in Education in Belgium (Merits), Ser. A, No 6 (1968), 1 *EHRR* (1979/1980), 252.

Klass v. Germany, Ser. A, No 28 (1978), 2 *EHRR* (1979/1980), 214.

Sunday Times v. UK, Ser. A, No 30 (1979), 2 *EHRR* (1979/1980), 245.

Gaskin v. UK, Ser. A, No 160 (1989), 12 *EHRR* (1990), 36.

Ringeisen v. Austria (No 1), Ser. A, No 13 (1971), 1 *EHRR* (1979/1980), 455.

König v. FRG, Ser. A, No 27 (1978), 2 *EHRR* (1979/1980), 170.

Marckx v. Belgium, Ser. A, No 31 (1979), 2 *EHRR* (1979/1980), 330.

Leander v. Sweden, Ser. A, No 116 (1987), 9 *EHRR* (1987), 433.

Soerings v. UK, Ser. A, No 161 (1989), 11 *EHRR* (1989) 439.

Powell & Rayner v. UK, Ser. A, No 172 (1990), 12 *EHRR* (1990), 355.

Fredin v. Sweden, Ser. A, No 192 (1991), 13 *EHRR* (1991), 784.

Oerlemans v. the Netherlands, Ser. A, No 219 (1991), 15 *EHRR* (1992), 561.

Pine Valley Developments et al. v. Ireland, Ser. A, No 222 (1991), 14 *EHRR* (1991), 319.

De Geouffre de la Pradelle v. France, Ser. A, No 253-B (1992).

Zander v. Sweden, Ser. A, No 279B (1993), 18 *EHRR* (1994), 175.

Lopez Ostra v. Spain, Ser. A, No 303-C (1995), 20 *EHRR* (1995), 277.

Balmer-Schafroth & Others v. Switzerland, No 67/1996/686/676, judgment of 26 August 1997; noted at *EHRLR* (1998), 94.

Inter-American Human Rights Cases

Advisory Opinion No. OC-2/82, 24 September 1982, on the effects of Reservations on the Treaty into Force of the American Convention (Articles 74 and 75), reprinted in 22 *ILM* (1983), 37.

Yanomami Indians v. Brazil, No. 7615, 5 March 1985, reprinted in *Inter-American Yearbook on Human Rights* (1985), 264.

Inter-American Commission on Human Rights in Huaorani People v. Ecuador, 1 June 1990, noted in 1 *YbIEL* (1990), 275.

Decisions of the UN Human Rights Committee

Bernard Ominayak, Chief of the Lubicon Band v. Canada, Communic. No. 167/1984, (1987, admissibility) (1990, merits), reprinted in 11 *HRLJ* (1991), 305.

Port Hope Environmental Group v. Canada (1982), Communic. No 67/1980, *Selected Decisions of the Human Rights Committee*, Vol.2 (Seventeenth to Thirty-second sessions), 20.

Aumeeruddy-Cziffra v. Mauritius (Mauritius Women case) (1981), Communic. No 35/1978, *Selected Decisions of the Human Rights Committee*, Vol. 1 (Second to Sixteenth sessions), 67.

A.D. v. Canada (1984), Communic. No R.19/78, *Selected Decisions of the Human Rights Committee*, Vol.2 (Seventeenth to Thirty-second sessions), 23; 79 *ILR* (1989), 261.

Lovelace v. Canada (1986), Communic. No 112/1981, *Selected Decisions of the Human Rights Committee*, Vol.2 (Seventeenth to Thirty-second sessions), 28.

Broeks v. Netherlands (1987), Communic. No.172/1984, *Selected Decisions of the Human Rights Committee*, Vol.2 (Seventeenth to Thirty-second sessions), 196.

E.W. et al. v. Netherlands (1993), Communic. No. 429/1990, CCPR/C/47/429/1990, Annex.

Bordes & Temeharo v. France (1996), Communic. No 645/1995, UN Doc. CCPR/C/57/D/645/1995; reproduced in 18 *HRLJ* (1997), 36.

Other International Decisions

The Arbitration Commission of the Conference on Yugoslavia, *Opinion No. 2*, 11 January 1992; 92 *ILR* (1993), 167.

National Cases

(a) Switzerland

Solothurn v. Aargau (1900), Schweizerischer Bundersgerichtsentscheide (BGE) 26 I 444.

Harrison v. Schweizerische Kreditanstalt (1970), BGE 96 II 79, partly translated in French at JT 1971 I 322.

(b) US

Banco Nacional de Cuba v. Sabbatino et al., 376 US 398 (1964).

Defenders of Wildlife v. Lujan, 91 F 2d 117 (8th Cir.1990), reversed by US Supreme Court, *Lujan v. Defenders of Wildlife*, 119 L Ed 2d 351 (1992).

American Cetacean Society et al. v. Malcolm Baldrige et al., 604 F Supp 1398 (D.D.C. 1985); confirmed in Appeal, 768 F 2d 426 (1985); reversed by US Supreme Court, *Japan Whaling Association & Japan Fisheries Association v. American Cetacean Society et al.*, 29 L Ed 2d 166 (1986), 106 S Ct 228660 (1988).

Sierra Club v. Morton (Secretary of the Interior of the US), 32 L Ed 2d 636 (1972).

(c) UK

Lord Dudley and Ward v. Lady Dudley (1705), Prec.Ch. 241.

Commissioners of Income v. Pemsel [1891] AC 531.

Bray v. Ford, [1896] AC 44.

Thompson's Trustee v. Heaton, [1974] 1 WLR 605.

(d) Philippines

Minor Oposa v. Secretary of the Department of Environment and Natural Resources, Supreme Court of the Philippines, 30 July 1993; 33 *ILM* (1994), 173.

(e) Australia

Commonwealth v. Tasmania, [1984-85] 154 Commonwealth Law Reports, 1.

Leatch v. Director-General, National Parks and Wildlife Service and Shoalhaven City Council, [1993] 81 Local Government and Environment Reports of Australia, 270.

Nicholls v. Director National Parks and Wildlife Service, Forestry Commission of New South Wales, Minister for Planning, [1994] 84 Local Government and Environment Reports of Australia, 397.

Minister for Immigration and Ethnic Affairs v. Teoh, [1995] 128 Australian Law Reports 353.

(f) Canada

Regina v. Crown Zellerbach Canada Ltd, [1988] 49 Dominion Law Reports, Fourth Series, 161.

(g) the Netherlands

Handelskwerkerij G.J. Bier B.V. and Stichting 'Reinwater' v. Mines de Potasse d'Alsace SA, District Court of Rotterdam, 12 May 1975, reported in 6 *Netherlands YbIL* (1975), 203.

Handelskwerkerij G.J. Bier B.V. and Stichting 'Reinwater' v. Mines de Potasse d'Alsace SA, District Court of Rotterdam, 8 January 1979, NJ (1979), No. 113; reported in 11 *Netherlands YbIL* (1980), 326.

Handelskwerkerij G.J. Bier B.V. v. Mines de Potasse d'Alsace SA, District Court of Rotterdam, 16 December 1983, NJ (1984), No. 341; reported in 15 *Netherlands YbIL* (1984), 471.

Mines de Potasse d'Alsace v. Onroerend Goed Maatschappij Bier BV, Firma Gebr. Strik, Handelskwerkerij Jac. Valstar BV, Court of Appeal of The Hague, 10 December 1986, *Tijdschrift voor Milieu Aansprakelijkheid* (1987), No. 1, 15, reported in 19 *Netherlands YbIL* (1988), 496.



International Treaties & Conventions

1880s

Convention for the Protection of Industrial Property, and Revisions, Paris, 20 March 1883, in force 6 July 1884; 4 *AJIL* (1910) *Suppl.*, 143 (**1883 Paris Convention for the Protection of Industrial Property**).

Covenant of League of Nations, 28 June 1919, Versailles; 13 *AJIL* (1919) *Suppl.*, 128 and 361.

1940s

Charter of the United Nations, and annexed Statute of the International Court of Justice, San Francisco, 26 June 1945, in force 24 October 1945; 82 UNTS 279; 39 *AJIL* (1945) *Suppl.*, 190 (**1945 UN Charter**).

International Convention for the Regulation of Whaling, Washington, 2 December 1946, in force 10 November 1948; 161 UNTS 72; 7 *Rüster & Simma* 3495; Sands, *Principles* (Vol. IIA), Doc. 29 (**1946 Whaling Convention**).

General Agreement on Tariff and Trade, Geneva, 30 October 1947, applied provisionally as from 1 January 1948 pursuant to the Protocol of Provisional Application of the Gatt, signed at Geneva, 30 October 1947; 55 UNTS 187 (**1947 Gatt**).

Convention on the Prevention and Punishment of the Crime of Genocide, 9 December 1948, in force 12 January 1961; 78 UNTS 277, Brownlie (ed.), *Basic Documents on Human Rights*, 3rd edn, 31; 45 *AJIL* (1951) *Suppl.*, 7.

1950s

International Convention for the Protection of Birds, Paris, 18 October 1950, in force 17 January 1963; 638 UNTS 186, 4 *Rüster & Simma* 1791; Sands, *Principles* (Vol. IIA), Doc. 30 (**1950 Birds Convention**).

European Convention for the Protection of Human Rights and Fundamental Freedoms, Rome, 4 November 1950, in force 3 September 1953; 213 UNTS 221; 45 *AJIL* (1951) *Suppl.*, 24 (**1950 European Convention for the Protection of Human Rights**).

Convention on the Political Rights of Women, New York, 31 March 1953, in force 7 July 1954; 193 UNTS 135; *The United Nations and the Advancement of Women 1954-1995*, Doc. 26.

International Convention for the Prevention of Pollution of the Sea by Oil, London, 12 May 1954, in force 26 July 1958; 327 UNTS 3; 1 Ruster & Simma 332 (**1954 Oil Pollution Convention**).

Interim Convention on Conservation of North Pacific Fur Seals, Washington, 9 February 1957, in force 14 October 1957; 314 UNTS 105; Sands, *Principles* (Vol. IIA), Doc. 40.

Treaty Establishing the European Economic Community, Rome, 27 March 1957, in force 1 January 1958; 298 UNTS 11; 4 *European Yb* (1958), 412 (**1957 EEC Treaty**).

Convention on the Continental Shelf, Geneva, 29 April 1958, in force 10 June 1964; 499 UNTS 311; 52 *AJIL* (1958), 858 (**1958 Continental Shelf Convention**).

Convention on Fishing and Conservation of the Living Resources of the High Seas, Geneva, 29 April 1958, in force 20 March 1966; 559 UNTS 285; 52 *AJIL* (1958), 851 (**1958 High Seas Conservation Convention**).

Convention on the High Seas, Geneva, 29 April 1958, in force 30 September 1962; 450 UNTS 11; 52 *AJIL* (1958), 842.

Convention on the Territorial Sea and the Contiguous Zone, Geneva, 29 April 1958, in force 10 September 1964; 516 UNTS 7477; 52 *AJIL* (1958), 834.

1960

OECD Convention on Third Party Liability in the Field of Nuclear Energy, Paris, 29 July 1960, in force 1 April 1968; 8 *European Yb* (1961), 203; 55 *AJIL* (1961), 1082.

1961

European Social Charter, Turin, 18 October 1961, in force 26 February 1965 (see *infra*, 1991 Protocol Amending the 1961 European Social Charter); 529 UNTS 89; 9 *European Yb* (1962), 247 (**1961 European Social Charter**).

1963

Convention Supplementary to the 1960 Convention on Third Party Liability in the Field of Nuclear Energy, Brussels, 31 January 1963, in force 4 December 1974; 11 *European Yb* (1964), 283; 12 Ruster & Simma 5990; 2 *ILM* (1963), 685 (**Brussels Supplementary Convention on Third Party Liability in the Field of Nuclear Energy**).

Convention on Civil Liability for Nuclear Damage and Optional Protocol, Vienna, 29 May 1963, in force 12 November 1977; 1063 UNTS 265; 2 *ILM* (1963), 727 (**Vienna Convention on Civil Liability for Nuclear Damage**).

1966

International Covenant on Civil and Political Rights and Optional Protocol, New York, 16 December 1966, in force 23 March 1976; 999 UNTS 171; 6 *ILM* (1967), 368.

International Covenant on Economic, Social and Cultural Rights, New York, 16 December 1966, in force 3 January 1976; 993 UNTS 3; 6 *ILM* (1967), 360.

1967

Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, London/Moscow/Washington, 27 January 1967, in force 10 October 1967; 610 UNTS 206; 1 *Rüster & Simma* 30; 6 *ILM* (1967), 386 (**1967 Outer Space Treaty**).

1968

African Convention on the Conservation of Nature and Natural Resource, Algiers, 15 September 1968, in force 5 March 1970; 1001 UNTS 3; 982 *IELMT* 62; Sands, *Principles* (Vol. IIA), Doc. 42 (**1968 African Convention on Nature**).

1969

Convention on the Law of Treaties, Vienna, 23 May 1969, in force 27 January 1980, 1155 UNTS 331, 8 *ILM* (1970), 679 (**1969 Vienna Convention on the Law of Treaties**).

American Convention on Human Rights, San José, 22 November 1969, in force 18 July 1978; OAS, Official Records, OEA/Ser.K/XVI/1.1, Doc. 65, Rev.1, Corr.1, 7 January 1970; 9 *ILM* (1970), 673, 65 *AJIL* (1971), 679.

International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, Brussels, 29 November 1969, in force 6 May 1975; UKTS 77 (1975); 1 *Rüster & Simma* 460; 9 *ILM* (1970), 25 (**1969 Intervention Convention**).

International Convention on Civil Liability for Oil Pollution Damage, Brussels, 29 November 1969, in force 19 June 1975; UKTS 106 (1975); 9 *ILM* (1970), 45 (**1969 Civil Liability Convention**).

1971

Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Ramsar, 2 February 1971, in force 21 December 1975; UKTS 34 (1976); 5 *Rüster & Simma* 2161; 11 *ILM* (1973), 963 (**1971 Ramsar Convention**).

1972

Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, Oslo, 15 February 1972, in force 7 April 1974; UKTS 119 (1975); 2 Ruster & Simma 530; 11 *ILM* (1972), 262 (1972 Oslo Convention on Marine Pollution from Ships and Aircraft).

Convention for the Conservation of Antarctic Seals, London, 1 June 1972, in force 11 March 1978; UKTS 45 (1978); 11 *ILM* (1972), 251 (1972 Antarctic Seals Convention).

UNESCO Convention for the Protection of the World Cultural and Natural Heritage, Paris, 16 November 1972, in force 17 December 1975; 14 Ruster & Simma 7238; 11 *ILM* (1972), 1358 (1972 World Heritage Convention).

Convention for the Prevention of Marine Pollution by Dumping Wastes and Other Matter, London, Mexico City, Moscow and Washington, 29 December 1972, in force 30 August 1975; UKTS 43 (1976); 11 *ILM* (1972), 1294 (1972 London Convention on Dumping of Wastes).

1973

Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 3 March 1973, in force 1 July 1975; 993 UNTS 243; 5 Ruster & Simma 2228; 12 *ILM* (1973), 1085 (1973 CITES).

International Convention for the Prevention of Pollution by Ships, London, 2 November 1973, in force 2 October 1983 (see *infra*, 1978 Protocol Relating to the 1973 International Convention for the Prevention of Pollution from Ships); Misc. 26 (1974); Sands, *Principles* (Vol. IIA), Doc. 16; 12 *ILM* (1973), 1319 (1973 MARPOL).

Agreement on the Conservation of Polar Bears, Oslo, 15 November 1973, in force 26 May 1976; 13 *ILM* (1974), 13 (1973 Polar Bears Agreement).

International Convention on the Suppression and Punishment of the Crime of Apartheid; 30 November 1973, in force 18 July 1976; 13 *ILM* (1974), 50.

1974

Nordic Convention on the Protection of the Environment, Stockholm, 19 February 1974, in force 5 October 1976; 1092 UNTS 279; 974 IELMT 14; 13 *ILM* (1974), 511; 1 *EPL* (1975), 45.

Convention on the Protection of the Marine Environment of the Baltic Sea Area, Helsinki, 22 March 1974, in force 3 May 1980; 2 Ruster & Simma 683; 13 *ILM* (1974), 546 (1974 Baltic Sea Convention).

Convention for the Prevention of Marine Pollution from Land-Based Sources, Paris, 4 June 1974, in force 6 May 1978; UKTS 64 (1978); 2 Ruster & Simma 748; 13 *ILM*

(1974), 352 (1974 Paris Convention on Marine Pollution from Land-Based Sources).

1976

Convention on the Protection of the Mediterranean Sea Against Pollution and Protocols, Barcelona, 16 February 1976, in force 12 February 1978 (see *infra*, 1995 Amendments to the 1976 Convention on the Protection of the Mediterranean Sea Against Pollution); 19 *Rüster & Simma* 9497; 15 *ILM* (1976), 290 (1976 Barcelona Convention on Mediterranean Sea, 1976 Barcelona Dumping Protocol, 1976 Barcelona Emergency Protocol).

Convention on the Prohibition of Military or Any Hostile Use of Environmental Modification Techniques; New York, 18 May 1977, in force 5 October 1978; 1108 UNTS 151; 16 *ILM* (1977), 88 (1977 ENMOD Convention).

Convention on Conservation of Nature in the South Pacific, Apia, 12 June 1976, in force 28 June 1990; 976 IELMT 45; 20 *Rüster & Simma* 10359 (1976 Apia Convention on Nature in the South Pacific).

Protocol I Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts, Geneva, 12 December 1977, in force 7 December 1978; 1125 UNTS 3; 16 *ILM* (1977), 1391.

1978

Protocol Relating to the 1973 International Convention for the Prevention of Pollution from Ships, London, 17 February 1978, in force 2 October 1983; Misc. 27 (1978); Sands, *Principles* (Vol. IIA), Doc. 16A; 17 *ILM* (1978), 246 (1973/78 MARPOL).

Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution, Kuwait, 23 April 1978, in force 1 July 1979; 1140 UNTS 13; 19 *Rüster & Simma* 9551; 17 *ILM* (1978), 511; 4 *EPL* (1978), 131 (1978 Kuwait Convention on the Marine Environment in the Arabian Gulf).

Kuwait Protocol concerning Co-operation on the Protection in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency, Kuwait, 23 April 1978, in force 1 July 1979; 17 *ILM* (1978), 526.

Treaty for Amazonian Co-operation, Brasilia, 3 July 1978, in force 2 February 1980; 978 IELMT 49; 18 *Rüster & Simma* 9017; 17 *ILM* (1978), 1045 (1978 Amazon Treaty).

Vienna Convention on Succession of States in respect of Treaties, 23 August 1978, in force 6 November 1996; UN Doc.A/CONF.80/31; 17 *ILM* (1978), 1488; 72 *AJIL* (1978), 971.

Agreement on Sharing of the Ganges' Waters, signed between Bangladesh and India, Dacca, 5 November 1977; in force upon signature; 17 *ILM* (1978), 103 (1978 Dacca Agreement).

1979

Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 23 June 1979, in force 1 November 1983; Misc. 11 (1980); 19 *ILM* (1980), 11; 5 *EPL* (1979), 158 (1979 Bonn Convention on the Conservation of Migratory Species).

Convention on the Conservation of European Wildlife and Natural Habitats, Bern, 19 September 1979, in force 1 June 1982; UKTS 56 (1982); 979 IELMT 70; 23 Ruster & Simma 40 (1979 Bern Convention on the Conservation of European Wildlife).

ECE Convention on the Long-Range Transboundary Air Pollution, Geneva, 13 November 1979, in force 16 March 1983; Misc. 10 (1980); 18 *ILM* (1979), 1442; 6 *EPL* (1980), 37 (1979 ECE Transboundary Air Pollution Convention).

Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, 5 December 1979, in force 11 July 1984; 1363 UNTS 3; 18 *ILM* (1979), 1434 (1979 Moon Treaty).

Convention on the Elimination of all forms of Discrimination against Women, New York, 18 December 1979, in force 3 September 1981; 1249 UNTS 13; 19 *ILM* (1980), 33; *The United Nations and the Advancement of Women 1954-1995*, Doc. 69.

Convention for the Conservation and Management of the Vicuña, Lima, 20 December 1979, in force 19 March 1982; 979 IELMT 94.

1980

Protocol for the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources, Athens, 17 May 1980, in force 17 June 83; OJ EC L67, 12 March 1983, 3; Ruster & Simma 2nd, Vol. 2, II/A/17-05-80; 19 *ILM* (1980), 869; 6 *EPL* (1980), 144 (1980 Athens Protocol for the Protection of Mediterranean Sea Against Pollution from Land-Based Sources).

Convention on the Conservation of Antarctic Marine Living Resources, Canberra, 20 May 1980, in force 7 April 1982; UKTS 48 (1982); Ruster & Simma 2nd, Vol. 2, III/A/20-05-80; 19 *ILM* (1980), 841; 6 *EPL* (1980), 140 (1980 CCAMLR).

1981

Convention for the Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, Abidjan, 23 March 1981, in force 5 August 1984; ; UN Doc.UNEP/IG.22/7; 981 IELMT 23; Ruster & Simma 2nd, Vol. 2, II/A/23-03-81-a; 20 *ILM* (1981), 746 (1981 Abidjan Convention on the Marine Environment in West and Central Africa).

Protocol concerning Co-operation in Combating Pollution in Cases of Emergency, Abidjan, 23 March 1981, in force 5 August 1984; 981 IELMT 24; Rüster & Simma 2nd, Vol. 2, II/A/23-03-81-b; 20 *ILM* (1981), 756 (1981 Abidjan Protocol concerning Co-operation in Combating Pollution in Cases of Emergency).

African Charter on Human and Peoples' Rights, Banjul, 26 June 1981, in force 21 October 1986; OAU Doc.CAB/LEG/67/3/Rev.5; 21 *ILM* (1982), 59.

Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific, Lima, 12 November 1981, in force 19 May 1986; UN Doc UNEP-CPPS/IG.32/4, UN Doc.UNEP-CPPS/IG.32/4; Rüster & Simma 2nd, Vol. 2, II/A/12-11-81-a (1981 Lima Convention on the Marine Environment in the South-East Pacific).

Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbon or Other Harmful Substances in Case of Emergency, Lima, 12 November 1981, in force 14 July 1986; Rüster & Simma 2nd, Vol. 2, II/A/12-11-81-b.

1982

Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment, Jeddah, 14 February 1982, in force 20 August 1985; Rüster & Simma 2nd, Vol. 2, II/A/14-02-82-a; 9 *EPL* (1982), 56 (1982 Jeddah Convention for the Conservation of the Red Sea and Gulf of Aden Environment).

Protocol concerning Regional Co-operation in Combating Pollution by Oil and Other Harmful Substances in Case of Emergency, Jeddah, 14 February 1982, in force 20 August 1985; 982 IELMT 14; Rüster & Simma 2nd, Vol. 2, II/A/14-02-82-b; 10 *EPL* (1983), 28 (1982 Jeddah Protocol concerning Regional Co-operation in Combating Pollution by Oil and Other Harmful Substances in Case of Emergency).

Protocol concerning Mediterranean Specially Protected Areas, Geneva, 3 April 1982, in force 23 March 1986; OJ EC L68, 1984, 38; Rüster & Simma 2nd, Vol. 1, I/A/03-04-82; Sands, *Principles* (Vol. IIA), Doc. 21D.

International Tropical Timber Agreement, 18 November 1983, provisionally applied from 1 April 1985; Rüster & Simma 2nd, Vol. 3, IV/A/18-11-83.

United Nations Convention on the Law of the Sea, Montego Bay, Jamaica, 10 December 1982, in force 16 November 1994, UN Doc.A/CONF.62/122 and Corr. 1 to 11; Misc. 11 (1983); 982 IELMT 92; 21 *ILM* (1982), 1261 (1982 UNCLOS).

1983

Convention on the Protection and Development of the Marine Environment of the Wider Caribbean Region, Cartagena de Indias, 24 March 1983, in force 11 May 1987;

Misc. 19 (1983); Rüster & Simma 2nd, Vol. 2, II/A/24-03-83-a; 22 *ILM* (1983), 221 (1983 **Cartagena Convention on the Marine Environment in the Wider Caribbean Region**).

Protocol Concerning Cooperation in Combating Oil Spills in the Wider Caribbean Region, Cartagena de Indias, 24 March 1983, in force 11 October 1986; Rüster & Simma 2nd, Vol. 2, II/A/24-03-83-b.

Vienna Convention on States Succession in Respect of State Property, Archives and Debts, Vienna, 8 April 1978, not in force; UN Doc.A/CONF.117/14; 22 *ILM* (1983), 306.

1985

Convention for the Protection of the Ozone Layer, Vienna, 22 March 1985, in force: 22 September 1988; 985 IELMT 22; Rüster & Simma 2nd, Vol. 4, VI/A/22-03-85; 26 *ILM* (1987), 1529 (1985 **Vienna Convention on the Ozone Layer**).

Convention for the Protection, Management and Development of the Marine and Coastal Environment of the East African Region, Nairobi, 21 June 1985, not in force; OJ EC C253, of 10.10.1986, 10; 985 IELMT 46; Rüster & Simma 2nd, Vol. 2, II/A/21-06-85-a; Hohmann (ed.), Basic Documents, Vol. 2, Doc. 52 (1985 **Nairobi Convention on the Marine Environment in East Africa**).

Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region, 21 June 1985, not in force; OJ EC C253, of 10.10.1986, 18; Rüster & Simma 2nd, Vol. 2, II/A/21-06-85-b; Hohmann (ed.), Basic Documents, Vol. 2, Doc. 52b.

Protocol Concerning Co-operation in Combating Pollution in Case of Emergency, Nairobi, 21 June 1985, not in force; OJ EC C253, of 10.10.1986, 26; 985 IELMT, 48; Rüster & Simma 2nd, Vol. 2, II/A/21-06-85-c; Hohmann (ed.), Basic Documents, Vol. 2, Doc. 52a (1985 **Nairobi Protocol Concerning Co-operation in Combating Pollution in Case of Emergency**).

Convention of the Law Applicable to Trusts and on their Recognition, The Hague, 1 July 1985, in force 1 January 1992; UKTS 14 (1992); draft text adopted unmodified by the parties at 23 *ILM* (1985), 1389 (1985 **Hague Convention of the Law Applicable to Trusts and on their Recognition**).

Protocol to the 1979 ECE Convention on the Long-Range Transboundary Air Pollution, on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at Least 30 Per Cent, Helsinki, 8 July 1985, in force 7 September 1987; 27 *ILM* (1988), 698.

Association of South East Asian Nations Agreement on the Conservation of Nature and Natural Resources, Kuala Lumpur, 9 July 1985, not in force; Rüster & Simma 2nd, Vol. 1, I/A/09-07-85; 15 *EPL* (1985) 64 (1985 **ASEAN Agreement on the Conservation of Nature**).

1986

Single European Act, Luxembourg, 17 February 1986, The Hague, 28 February 1986, in force 1 July 1987; UKTS 31 (1988); 25 *ILM* (1986), 503; 23 *Common Market LR* (1986), 813 (1986 SEA; 1957 EEC Treaty as modified by 1986 SEA is referred to as **1986 EC Treaty**)

Convention on Early Notification of Nuclear Accidents, Vienna, 26 September 1986, in force 27 October 1986; Rüster & Simma 2nd, Vol. 5, VII/A/26-09-86-a; 25 *ILM* (1986), 1370, 16 *EPL* (1986), 162 (**1986 Early Notification Convention**).

Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea, 25 November 1986, in force 22 August 1990; Rüster & Simma 2nd, Vol. 2, II/A/24-11-86; 26 *ILM* (1987), 38.

Protocol Concerning Co-operation in Combating Pollution Emergencies, Noumea, 25 November 1986, in force 22 August 1990; Rüster & Simma 2nd, Vol. 2, II/A/24-11-86a; 26 *ILM* (1987), 59 (**1986 Noumea Protocol Concerning Co-operation in Combating Pollution Emergencies**).

1987

Action Plan for the Mediterranean, Athens, 4 June 1987; Rüster & Simma 2nd, Vol. 2, II/B/04-06-87.

Montreal Protocol on Substances that Deplete the Ozone Layer Montreal, 10 September 1987, in force 1 January 1989; 985 IELMT 22/A; Rüster & Simma 2nd, Vol. 4, VI/A/16-09-87; 26 *ILM* (1987), 1541; 17 *EPL* (1987), 256 (**1987 Montreal Protocol on the Ozone Layer**).

1988

Convention on the Regulation of Antarctic Mineral Resource Activities, Wellington, 2 June 1988, not in force; Rüster & Simma 2nd, Vol. 1, I/A/02-06-88-B; 27 *ILM* (1988), 281; 18 *EPL* (1988), 115 (**1988 CRAMRA**).

Protocol to the 1979 ECE Convention on the Long-Range Transboundary Air Pollution, Concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes, Sofia, 31 October 1985; 28 *ILM* (1989), 212.

Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights, San Salvador, 14 November 1988, not in force; 28 *ILM* (1989), 156.

1989

Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal, Basel, 22 March 1989, in force 24 May 1992; UN.Doc.UNEP/WG.190/4; Rüster & Simma 2nd, Vol. 5, IX/A/22-03-89; 28 *ILM* (1989), 657; 19 *EPL* (1989), 68 (1989 Basel Convention on Transboundary Movement of Hazardous Wastes).

Convention No 169, Concerning Indigenous and Tribal Peoples in Independent Countries, adopted by ILO at its 76th Session, Geneva, 27 June 1989, in force 5 September 1991; 72 *ILO Official Bulletin* (1989), 59; 28 *ILM* (1989), 1382 (1989 ILO Convention on Indigenous Peoples).

Convention on the Rights of the Child, New York, 20 November 1989, in force 2 September 1990; UN Doc.A/Res./44/25; 28 *ILM* (1989), 1448.

Protocol for the Conservation and Management of the Protected Marine and Coastal Areas of the South-East Pacific, Paipa, Colombia, 21 September 1989, not yet in force; 989 IELMT 71.

Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific, Wellington, 24 November 1989, in force 17 May 1991; 989 IELMT 87; 29 *ILM* (1990), 1454 (1989 Wellington Convention on Long Driftnets).

African, Caribbean and Pacific States-European Economic Community, Fourth Lomé Convention, Lomé, 15 December 1989, in force 1 March 1990, for a ten year period; EEC Treaty Series 96 (1990); 989 IELMT 93; 29 *ILM* (1989), 783 (1989 ACP-EEC Lomé IV).

1990

Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Kingston, 18 January 1990, not in force; 990 IELMT 85; 1 *YbIEL* (1990), 441; Hohmann (ed.), Basic Documents, Vol. 2, Doc. 51b.

Adjustments and Amendments to the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, London, 29 June 1990, in force 10 August 1992; UN.Doc.UNEP/O3L.Pro.2/3; Rüster & Simma 2nd, Vol. 4, VI/A/29-06-90; 30 *ILM* (1991), 537 (Montreal Protocol on the Ozone Layer as amended/adjusted in 1990).

International Convention on Oil Pollution Preparedness, Response and Co-operation, London, 30 November 1990, in force 13 May 1995; 990 IELMT 88; 30 *ILM* (1991), 733; 1 *YbIEL* (1990), 561 (1990 Oil Pollution Preparedness Convention).

1991

Convention on the Ban of Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, Bamako, 21 January 1991, not in force; 991 IELMT 74; Rüster & Simma 2nd, Vol. 5, IX/A/30-01-91; 30 *ILM* (1991), 775; 31 *ILM* (1992), 164; 2 *YbIEL* (1991), 632 (1991 Bamako Convention on Transboundary Movement of Hazardous Wastes).

Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, 25 February 1991, in force 10 September 1997; Doc.E.ECE.1250; 991 IELMT 15; 30 *ILM* (1991), 800; 2 *YbIEL* (1991), 697 (1991 ECE Convention on Environmental Impact Assessment).

Protocol on Environmental Protection to the Antarctic Treaty, Madrid, 4 October 1991, in force January 1998; 30 *ILM* (1991), 1461; 2 *YbIEL* (1991), 531 (1991 Antarctic Treaty Environmental Protocol).

Protocol Amending the 1961 European Social Charter, adopted by the Council of Europe, 21 October 1991, Turin, not in force; 31 *ILM* (1992), 155.

Convention on the Protection of Alps, Salzburg, 7 November 1991, in force 6 March 1995; 991 IELMT 83; 31 *ILM* (1992), 767 (1991 Alps Convention).

Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of the Emissions of Volatile Organic Compounds of their Transboundary Fluxes, Geneva, 18 November 1991, not in force; UN.Doc.ECE/EB.AIR/30; 31 *ILM* (1992), 573; 2 *YbIEL* (1991), 720.

1992

Treaty on European Union, Maastricht, 7 February 1992, in force 1 November 1993; UKTS 12 (1994); 31 *ILM* (1992), 247 (1992 EU Treaty).

UN/ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Helsinki, 17 March 1992, in force 6 October 1996; UN Doc.ENWA/R.53 and Add. 1; 992 IELMT 20; 31 *ILM* (1992), 1312; 3 *YbIEL* (1992), 703 (1992 ECE Watercourses Convention).

UN/ECE Convention on the Transboundary Effects of Industrial Accidents, Helsinki, 17 March 1992, not in force; Doc.ENWA/R.54 and Add. 1; 992 IELMT 22; 31 *ILM* (1992), 1330; 3 *YbIEL* (1992), 722 (1992 ECE Industrial Accidents Convention).

Convention on the Protection of the Marine Environment of the Baltic Sea Area, Helsinki, 9 April 1992, not in force; 992 IELMT 28; 22 *Law of the Sea Bulletin* (1993), 54 (1992 Baltic Sea Convention).

Agreement on the European Economic Area, Oporto, 2 May 1992, in force 1 January 1994; EEC Treaty Series 7 (1992) (1992 European Economic Area Agreement).

United Nations Framework Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994; UN.Doc.A/AC.237/18(Part II)/Add.1 and Corr. 1; 992 IELMT 35; 31 *ILM* (1992), 849; 3 *YbIEL* (1992), 684 (1992 Climate Change Convention).

Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993; UN.Doc.UNEP/Bio.Div./N7-INC.5/4; 992 IELMT 42; 31 *ILM* (1992), 822; 3 *YbIEL* (1992), 664 (1992 Biodiversity Convention).

Adjustments and Amendment to the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, Copenhagen, 23-25 June 1992, in force 1 January 1994; UN.Doc.UNEP/O3L.Pro.4/15; 32 *ILM* (1993), 874; 3 *YbIEL* (1992), 805 (Montreal Protocol on the Ozone Layer as adjusted/amended in 1992).

Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 22 September 1992, not in force; 992 IELMT 71; 32 *ILM* (1993), 1069; 3 *YbIEL* (1992), 759; 8 *IJMarine & Coastal L* (1993), 50 (1992 OSPAR Marine Environment Convention).

North American Free Trade Agreement, Washington/Ottawa/Mexico City, 8, 11, 14 and 17 December 1992, in force 1 January 1994; 32 *ILM* (1993), 289 and 605 (1992 NAFTA).

1993

ECE Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, Lugano 21 June 1993, not in force; 993 IELMT 19; 32 *ILM* (1993), 1228; 4 *YbIEL* (1993), 691.

North American Agreement of Environmental Cooperation, Washington/Ottawa/Mexico City, 13 September 1993, in force 1 January 1994; 993 IELMT 68; 32 *ILM* (1993), 1480; final draft in 4 *YbIEL* (1993), 831.

1994

International Tropical Timber Agreement, Geneva, 26 January 1994, opened for signature 1 April 1994; 994 IELMT 07; 33 *ILM* (1994), 1016; 5 *YbIEL* (1994), 832 (1994 Tropical Timber International Agreement).

Instrument Establishing the (restructured) Global Environmental Facility, Geneva, 16 March 1994, formally adopted by the three implementing Agencies in accordance of Para. 1 of the Instrument in 1994: UNDP/UNFPA Executive Board, Doc. DP/1994/9, New York, 13 May 1994; UNEP Governing Council, Res.SS.VI.1, 18 June 1994; World Bank Executive Directors, Res. 94-2, and World Bank Board of Governors, Res. No. 487, 7 July 1994; 33 *ILM* (1994), 1273; extracts in 24 *EPL* (1994), 192; for the formal ratification of implementing bodies, consult GEF Web Site at [<http://www.worldbank.org/html/gef>].

Agreement Establishing the World Trade Organization, Marrakech, 15 April 1994, and Annex 1A, General Agreement on Tariffs and Trade; 33 *ILM* (1994), 1144 (**1994 WTO Agreement, and 1994 GATT**).

Protocol to the 1979 Transboundary Air Pollution Convention, on Further Reduction of Sulphur Emissions, Oslo, 14 June 1994, not in force; 33 *ILM* (1994), 1542; 5 *YbIEL* (1994), 743.

Convention to Combat Desertification in those Countries Experiencing Drought and/or Desertification, in Africa, Paris, 17 June 1994, in force 26 December 1996; UN.Doc.A/AC.241/15/Rev.3; 994 IELMT 76; 33 *ILM* (1994), 1332; 5 *YbIEL* (1994), 685 (**1994 Desertification Convention**).

Convention on Cooperation for the Protection and Sustainable Use of the Danube River, Sofia, 29 June 1994, not in force; 994 IELMT 49 (**1994 Danube River Convention**).

Agreement Relating to the Implementation of Part XI of the United Nations of the Laws of the Sea of 10 December 1982, annexed to UNGA Res.48/263, New York, 28 July 1994, in force 16 November 1994; 994 IELMT 56; 33 *ILM* (1994), 1309; 5 *YbIEL* (1994), 905 (**1994 UNCLOS Agreement Relating to the Implementation of Part XI**).

Energy Charter Treaty, Lisbon, 17 December 1994, not in force; 994 IELMT 93; 34 *ILM* (1995), 373 (**1994 Energy Charter Treaty**).

Protocol for the Implementation of the Alpine Convention in the Field of Town and Country Planning and Sustainable Development, Chambéry, 20 December 1994, not yet in force; 991 IELMT 83b (**1994 Planning and Sustainable Development Alpine Protocol**).

1995

Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, Chang Rai, 5 April 1995, in force upon signature; 5 *Asian YbIL* (1995), 591.

Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, Amendments to the 1976 Convention on the Protection of the Mediterranean Sea Against Pollution, 10 June 1995, not yet in force; UNEP(OCA)/MED IG.6/7 (**1976/95 Barcelona Convention on Mediterranean Sea**).

Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982, Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 4 August 1995, open for Signature 4 December 1995; 34 *ILM* (1995), 1542; 6 *YbIEL* (1995), 841 (**1995 Straddling Fish Stocks Agreement**).

1996

European Social Charter, Strasbourg, 3 May 1996, not in force; 36 *ILM* (1997), 31 (1996 European Social Charter (revised)).

Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, London, 7 November 1996, not in force; 36 *ILM* (1997), 7 (1996 Protocol to 1972 London Convention on Dumping of Wastes).

Treaty between the Government of the Republic of India and the Government of the People's Republic of Bangladesh on Sharing of the Ganga/Ganges Waters at Farakka, New Delhi, 12 December 1996, in force 1 January 1997; 36 *ILM* (1997), 523 (1996 Treaty on Sharing of the Ganges Waters at Farakka)

1997

UN Convention on the Non-Navigational Uses of International Watercourses, New York, 21 May 1997, opened for signature 21 May 1997, not yet in force; UN.Doc.A/51/869; 36 *ILM* (1997), 700; 37 *EPL* (1997), 233.

Kyoto Protocol to the United Nations Framework Convention on Climate Change, adopted by the Conference of the Parties, Third session, Kyoto, 1-10 December 1997, FCCC/CP/1997/L.7/Add.1 10 December 1997, not in force; 37 *ILM* (1998), 32 (1997 Kyoto Protocol to the Climate Change Convention).



**PAGE
NUMBERING
AS ORIGINAL**

European Social Charter, Strasbourg, 3 May 1996, not in force; 36 *ILM* (1997), 31 (1996 European Social Charter (revised)).

Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, London, 7 November 1996, not in force; 36 *ILM* (1997), 7 (1996 Protocol to 1972 London Convention on Dumping of Wastes).

Treaty between the Government of the Republic of India and the Government of the People's Republic of Bangladesh on Sharing of the Ganga/Ganges Waters at Farakka, New Delhi, 12 December 1996, in force 1 January 1997; 36 *ILM* (1997), 523 (1996 Treaty on Sharing of the Ganges Waters at Farakka)

1997

UN Convention on the Non-Navigational Uses of International Watercourses, New York, 21 May 1997, opened for signature 21 May 1997, not yet in force; UN.Doc.A/51/869; 36 *ILM* (1997), 700; 37 *EPL* (1997), 233.

Kyoto Protocol to the United Nations Framework Convention on Climate Change, adopted by the Conference of the Parties, Third session, Kyoto, 1-10 December 1997, FCCC/CP/1997/L.7/Add.1 10 December 1997, not in force; 37 *ILM* (1998), 32 (1997 Kyoto Protocol to the Climate Change Convention).



Declarations, Resolutions and Other Relevant Documents.

1940s

Declaration on the Aims and Purposes of the International Labour Organization, adopted by International Labour Conference at its Twenty-sixth Session, Philadelphia, in April-May 1944, and later incorporated in the 1946 ILO constitutive Charter; reprinted in 38 *AJIL* (1944) *Suppl.*, 203.

American Declaration of Rights and Duties of Man, Res. XXX, adopted by the International Conference of American States, Bogotá, 2 May 1948; Final Act of the Ninth International Conference of American States, Bogotá, 30 March -2 May 1948 (Pan American Union, 1948), 38, reprinted in 43 *AJIL* (1949), 133.

Universal Declaration of Human Rights, 10 December 1948, UNGA, A/Res/217 (III) A, GAOR, 3rd Session, Part 1; reprinted in Brownlie (ed.), *Basic Documents on Human Rights*, 3rd edn, 21.

1950s

Principles of the Law Governing the Uses of the Waters of International Rivers, adopted by ILA at its forty-seventh Conference, Dubrovnik, 1956; ILA, *Report of the forty-seventh Conference*, Dubrovnik, 1956, 241.

1960s

Declaration on the Granting of Independence to Colonial Countries and Peoples. UNGA, A/Res/1514 (XV), 14 December 1960, GAOR 15th Session, Supplement No. 16 (A/4684); Brownlie (ed.), *Basic Documents on Human Rights*, 3rd edn, 298 (1960 **Decolonisation Charter**).

United Nations Development Decade: A Programme for International Economic Co-operation, UNGA, A/Res/1710(XVI) and A/Res/1715 (XVI), 19 December 1961, GAOR 16th Session, Supplement No. 17 (A/5100) (1961 **Strategy for the First Development Decade**).

Resolution on Permanent Sovereignty over Natural Resources, landmark Resolution, UNGA, A/Res/1803 (XVII), 14 December 1962, GAOR 17th Session, Supplement No. 17 (A/5217); 2 *ILM* (1963), 223 (1962 landmark Resolution on Sovereignty over Natural Resources).

Declaration of the Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, UNGA A/Res./1962 (XVIII), 13 December 1963, GAOR 18th Session, Supplement No. 15 (A/5515); 3 *ILM* (1964), 160; 58 *AJIL* (1964), 477.

Rules on the Use of Waters of International Rivers, adopted by ILA at its fifty-second Conference, Helsinki, 1966; *ILA Report of the fifty-second Conference*, Helsinki, 1966, 484; 11 *Rüster & Simma* 4741; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 12 (ILA 1966 Helsinki Rules on the Use of Waters of International Rivers).

Charter of Algiers on Co-ordination of G77 Policies in UNCTAD, adopted by the Ministerial Meeting of 77 Developing Countries, 24 October 1967; 7 *ILM* (1968) 177.

European Water Charter, adopted by the Council of Europe, Strasbourg, 6 May 1968; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 32.

Proclamation of Teheran, adopted by the International Conference on Human Rights, Teheran, 22 April - 13 May 1968; 63 *AJIL* (1969), 674.

Declaration on Social Progress and Development, UNGA, A/Res/2542 (XXIV), 11 December 1969, GAOR 24th Session, Supplement No. 30 (A/7630); reprinted (in French) in Dupuy (ed.), *The Right to Development at the International Level*, Hague Academy of International Law Workshop, 1979 (Sijthoff & Noordhoff, 1980), at 58 (1969 Declaration on Social Progress).

1970

Declaration on Principles of International Law Concerning Friendly Relations and Co-Operation Among States in Accordance with the Charter of the United Nations, UNGA, A/Res/2625 (XXV), 24 October 1970, GAOR 25th Session, Supplement No. 28 (A/8028); 65 *AJIL* (1971), 243 (1970 Declaration on Friendly Relations).

International Development Strategy for the Second United Nations Development Decade, UNGA, A/Res/2626 (XXV) Annex, 24 October 1970, GAOR 25th Session, Supplement No. 28 (A/8028) (1970 Strategy for the Second Development Decade).

Declaration of Principles Governing the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, Beyond the Limits of National Jurisdiction, UNGA, A/Res./2749 (XXV), 17 December 1970, GAOR 25th Session, Supplement No. 28 (A/8028) (1970 Declaration of Principles Governing the Sea Bed and Ocean Floor, and the Subsoil Thereof, Beyond the Limits of National Jurisdiction).

1972

Guiding Principles Concerning International Economic Aspects of Environmental Policies, OECD Council Recommendation C(72)128, 26 May 1972; 11 *ILM* (1972), 1172; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 25 (OECD Recommend. C(72)128, on Guiding Principles Concerning International Economic Aspects of Environmental Policies).

Declaration of the United Nations Conference on the Human Environment, and attached Action Plan for the Human Environment, Stockholm, 5-16 June 1972, A/CONF.48/14/Rev.1; 1 *Rüster & Simma* 118; 11 *ILM* (1972), 1416 (1972 Stockholm Declaration on the Human Environment & Action Plan for the Human Environment).

Resolution on Co-operation Between States in the Field of the Environment, UNGA, A/Res/2995 (XXVII), 15 December 1972, GAOR 27th Session, Supplement No. 30 (A/8730) (1972 UNGA Resolution 2995 (XXVII) on Co-operation Between States in the Field of the Environment).

1973

Resolution on Co-operation in the Field of the Environment Concerning Natural Resources Shared by Two or More States, UNGA, A/Res/3129 (XXVIII), 13 December 1973, GAOR 28th Session, Supplement No. 30 (A/9030); 11 *EPL* (1975), 103 (1973 Resolution 3129 (XXVIII), on Co-operation in the Field of the Environment Concerning Natural Resources Shared by Two or More States).

1974

Declaration on the Establishment of a New International Economic Order, UNGA A/Res/3201 (S-VI), 9 May 1974 and attached Programme of Action, A/Res/3202 (S-VI), 16 May 1974; 13 *ILM* (1974), 715; 70 *Department of State Bulletin* (1974) No. 1822, 572 (1974 NIEO Declaration and NIEO Programme of Action).

Analysis of the Environmental Consequences of Significant Public and Private Projects, OECD Council Recommend. C(74)216, 14 November 1974; 1 *Rüster & Simma* 297 (OECD Recommend. C(74)216, on Analysis of the Environmental Consequences of Significant Public and Private Projects).

Declaration on Environmental Policy, OECD, adopted by Member Governments during the Meeting of Environment Committee at Ministerial Level, 14 November 1974; 1 *Rüster & Simma* 326; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 25 (1974 OECD Declaration on Environmental Policy).

Implementation of the Polluter-Pays Principle, OECD Council Recommend. C(74)223, 14 November 1974; 14 *ILM* (1975), 234; Burhenne & Jahnke, *International Environmental Soft Law* 974 : 9525; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 25b

(1974 OECD Recommend. C(74)233, on the Implementation of the Polluter-Pays Principle).

OECD Principles Concerning Transfrontier Pollution, annexed to OECD Council Recommend. C(74)224, 14 November 1974; 1 *EPL* (1975), 44.

Resolution on the Definition of Aggression, UNGA, A/Res/3314 (XXIX), 14 December 1974, GAOR 29th Session, Supplement No. 31 (A/9631); 69 *AJIL* (1975), 480.

1975

Charter on Economic Rights and Duties of States, UNGA, A/Res/3281 (XXIX), 15 January 1975, GAOR 29th Session, Supplement No. 31 (A/9631); 14 *ILM* (1975) 251, 72 Department of State Bulletin (1975), No. 1558, 147 (1975 Economic Charter).

Resolution on Development and International Economic Cooperation, UNGA, A/Res/3362 (S-VII), 16 September 1975; 14 *ILM* (1975), 1524.

Final Act, adopted by the Conference on Security and Cooperation in Europe, Helsinki, 30 July 1975; 14 *ILM* (1975), 1292; relevant extracts on the environment in 1 *EPL* (1975), 108 (1975 Helsinki Final Act of CSCE).

1976

Equal Right of Access, OECD Council Recommend. C(76)55, 11 May 1976; Burhenne & Jahnke, *International Environmental Soft Law*, 976 : 3605; 2 *EPL* (1976), 104; 15 *ILM* (1976), 1218.

Bern Criteria for the Addition of Species and other Taxa to [CITES] Appendices I & II, and for the Transfer of Species and Other Taxa from [CITES] Appendix II to Appendix I; adopted at the First Meeting of Conference of the Parties to CITES, Proceedings of the First Meeting of the Conference of the Parties, 2-6 November 1976 (IUCN, 1977), 31; 2 *EPL* (1976) 189.

1977

Implementation of a Regime of Equal Right of Access and Non Discrimination in Relation to Transfrontier Pollution, OECD Council Recommend. C(77)28, 17 May 1977; 18 *Rüster & Simma* 9344; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 29b.

Water Action Plan, adopted by UN Water Conference, Mar del Plata, Argentina, March 1977; extracts in 3 *EPL* (1977), 92 (1977 Mar del Plata Water Action Plan).

1978

Déclaration universelle des droits du peuple, adopted by the Conférence de Juristes, de sociologues, de politologues, de philosophes et d'économistes sous l'égide de la Fondation Internationale LELIO BASSO pour le droit et la libération des peuples et de la ligue internationale pour le droit et la libération des peuples, Alger, 1978; reproduced

in A. Cassese & E. Jouve, *Pour un droit des peuples, Essais sur la Déclaration d'Alger* (Berger-Levrault, Paris, 1978) **(1978 Déclaration d'Alger des droits du peuple)**.

Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilisation of Natural Resources Shared by two or More States, UNEP Governing Council Dec. 6/16, Nairobi, 19 May 1978; 4 *EPL* (1978), 48; 17 *ILM* (1978), 1098 **(1978 UNEP Draft Principles on Shared Natural Resources)**.

1979

Declaration of Anticipatory Environmental Policies, issued by the Governments of OECD Member Countries and Yugoslavia, 8 May 1979; *OECD and the Environment* (OECD, Paris, 1986), 17; Rüster & Simma 2nd, Vol. 1, I/F/08-05-79-a; 5 *EPL* (1979), 157 **(1979 OECD/Yugoslavia Declaration of Anticipatory Environmental Policies)**.

Recommendation on the Assessment of Projects with Significant Impact on the Environment, OECD Council Recommendation C(79)116, 8 May 1979; *OECD and the Environment* (OECD, Paris, 1986), 29; Rüster & Simma 2nd, Vol. 1, I/F/08-05-79-b; 5 *EPL* (1979), 154; Hohmann (ed.), *Basic Documents*, Vol. 1, Doc. 28 **(OECD Recommend. C(79)116, on the Assessment of Projects with Significant Impact on the Environment)**.

1980

Belem Declaration on the Amazonian Cooperation Treaty, issued by the Ministers of Foreign Affairs from the Signatory Countries of the Amazonian Cooperation Treaty, Belem, Brazil, 23-24 October 1980; unofficial translation from Portuguese in 7 *EPL* (1981), 46.

Resolution on the Historical Responsibility of States for the Preservation of Nature for Present and Future Generations, UNGA, A/Res/35/8, 30 October 1980; Rüster & Simma 2nd, Vol. 1, I/C/30-10-80; 7 *EPL* (1981) 93 **(1980 Resolution on the Historical Responsibility of States for the Preservation of Nature for Present and Future Generations)**.

Salzburg Declaration, prepared at the Second European Conference 'The Environment and Human Rights, Salzburg, 2-3 December 1980; 7 *EPL* (1981), 94.

International Development Strategy for the Third United Nations Development Decade, appended to UNGA, A/Res/35/56, 5 December 1980 **(1980 Strategy for the Third Development Decade)**.

Draft Articles on State Responsibility, considered by the UN International Law Commission at its 32nd Session; 1980 *YbILC* Vol. II, Pt. 2, 30 **(1980 ILC Draft Articles on State Responsibility)**.

1981

Program for the Development and Periodic Review of Environmental Law, drafted by Ad Hoc Meeting of Senior Government Officials Expert in Environmental Law, Montevideo, 6 November 1981, adopted by UNEP Governing Council Decision 10/21, 31 May 1982; 1 *Rüster & Simma* 123 (1981 **Montevideo Program for the Development and Periodic Review of Environmental Law**).

1982

Nairobi Declaration on the State of World-wide Environment, UNEP, Nairobi, 18 May 1982, GAOR 37th Session, Supplement No. 25 (A/37/25); *Rüster & Simma* 2nd, Vol. 1, I/D/18-05-82-b; 21 *ILM* (1982) 676 (1982 **Nairobi Declaration**).

The Environment in 1982: Retrospect and Prospect, UNEP, Nairobi, 18 May 1982, GAOR 37th Session, Supplement No. 25 (A/37/25); *Rüster & Simma* 2nd, Vol. 1, I/D/18-05-82-a (1982 **UNEP decision on The Environment in 1982 - Retrospect and Prospect**).

World Charter for Nature, annexed to UNGA, A/Res./ 37/7, 28 October 1982, GAOR 37th Session, Supplement No. 51 (A/37/51); *Rüster & Simma* 2nd, Vol. 1, I/C/28-10-82; *Burhenne & Jahnke, International Environmental Soft Law*, 982 : 8005; 22 *ILM* (1983), 455; 6 *EPL* (1980), 45.

Rules on Water Pollution in an International Drainage Basin, adopted by ILA at its Sixtieth Conference, Montreal, 1982; ILA, *Report of the Sixtieth Conference*, Montreal, 1982, 1; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 13 (ILA 1982 **Rules on Water Pollution in an International Drainage Basin**).

Rules of International Law Applicable to Transfrontier Pollution, adopted by ILA at its Sixtieth Conference, Montreal, 1982; adopted by ILA at its Sixtieth Conference, Montreal, 1982; ILA, *Report of the Sixtieth Conference, Montreal*, 1982, 535; 10 *EPL* (1983), 27 (ILA 1982 **Montreal Rules of International Law Applicable to Transfrontier Pollution**).

1983

Cooperation in the Field of the Economics of Science and Technology and the Environment, extracts from the Conference on Security and Cooperation in Europe, 1989 Concluding Document of the Second Follow-up Meeting, Madrid, 11 November 1980-9 September 1983; 22 *ILM* (1983), 1395 (1983 **Madrid Concluding Document of CSCE Second Follow-up Meeting, Cooperation in the Field of the Economics of Science and Technology and the Environment**).

1984

Draft Rules on Legal Aspects of Long-Distance Air Pollution, adopted by ILA at its Sixty-first Conference, Paris, 1984; ILA, *Report of the Sixty-first Conference*, Paris,

1984, 383; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 14a (ILA 1984 Draft Rules on Legal Aspects of Long-Distance Air Pollution).

1985

Guidelines on the Protection of the Marine Environment Against Pollution from Land-Based Resources, UNEP Governing Council Dec. 13/18/II, 19 April 1985; Rüster & Simma 2nd, Vol. 2, II/D/24-05-85; Burhenne & Jahnke, *International Environmental Soft Law*, 985 : 3905; 14 *EPL* (1985), 77 (1985 UNEP Montreal Guidelines on the Protection of the Marine Environment Against Pollution from Land-Based Source).

Economic Declaration Towards Sustained Growth and Higher Employment, adopted by the Seven Major Industrialised Democracies, Bonn, 4 May 1985 (1985 Bonn Economic Declaration of the G7).

Declaration on Environment: Resource for the Future, issued by the Governments of OECD Member Countries and Yugoslavia, 20 June 1985; *OECD and the Environment* (OECD, Paris, 1986), 19; Rüster & Simma 2nd, Vol. 1, I/F/20-06-85-a; 14 *EPL* (1985), 34 (1985 OECD/Yugoslavia Declaration on Environment).

Assessment of Development Assistance Projects and Programmes, OECD Council Recommend. C(85)104, 20 June 1985; *OECD and the Environment* (OECD, Paris, 1986), 30; Rüster & Simma 2nd, Vol. 1, I/F/20-06-85-b; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 28a.

Nairobi Forwards Looking Strategy for the Advancement of Women, adopted at the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, Nairobi, 15-26 July 1985, UN/A/CONF.116/25/Rev.1, 2-90; extracts in *The United Nations and the Advancement of Women, 1954-1995*, Doc. 84.

1986

Rules on the Law of International Groundwater Resources, adopted by ILA at its Sixty-second Conference, Seoul, 1986; ILA, *Report of the Sixty-second Conference*, Seoul, 1986, 383 (1986 ILA Rules on the Law of International Groundwater Resources).

Restatement of the Law of the Foreign Relations of the US, American Law Institute, *Restatement of the Law of the US*, Vol.2 (American Law Institute, Saint Paul/Minn., 1987), 99; reproduced in Hohmann, *Basic Documents*, Vol.1, Doc. 39 (1986 US Third Restatement of the Law).

Tunis Declaration on Environment and Development, adopted by the Arab League, Tunis, 13-14 October 1986; Burhenne & Jahnke, *International Environmental Soft Law*, 886 : 7605; 16 *EPL* (1986), 218.

Declaration on the Right to Development, UNGA, A/Res/41/128, 4 December 1986, GAOR 41st Session, Supplement No. 53 (A/41/53); reproduced in Harris, *Cases &*

Materials, 690 (1986 Declaration on the Right to Development). General Principles Concerning Natural Resources and Environmental Interferences, adopted by WCED-EG, 1986; reproduced in full in Experts Group on Environmental Law of the World Commission on Environment and Development, Environmental Protection and Sustainable Development (Graham & Trotman/Nijhoff, 1987), 25; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 40; summarised version 16 *EPL* (1986), 168 (1986 WCED-EG Legal Principles for Environmental Protection and Development).

1987

Guideline on the Goals and Principles of Environmental Impact Assessment, UNEP Governing Council Dec. 14/25, 17 January 1987; Burhenne & Jahnke, *International Environmental Soft Law*, 987 : 4405; 17 *EPL* (1987), 36 (1987 UNEP Guideline on Environmental Impact Assessment).

Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, considered by the UN International Law Commission at its 39th Session; 1987 *YbILC* Vol. II Pt. 2, 32 (1987 ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses).

Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes, adopted by UNEP Governing Council Dec. 14/30, Cairo, 17 June 1978; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 7; draft of UNEP ad hoc Working Group in 16 *EPL* (1986), 31 (UNEP 1987 Cairo Guidelines on Hazardous Wastes).

Mediterranean Action Plan, adopted by the fifth meeting of the Contracting Parties to the 1976 Convention on the Protection of the Mediterranean Sea, Athens, 7-11 September 1987; 18 *EPL* (1988), 38.

Environmental Perspective to the Year 2000 and Beyond, adopted by UNEP, annexed to UNGA, A/Res/42/186, 11 December 1987, GAOR 42nd Session, Supplement No. 49 (A/42/49); Rüster & Simma 2nd, Vol. 1, I/C/11-12-87-b; Burhenne & Jahnke, *International Environmental Soft Law*, 987 : 9205 ; 18 *EPL* (1988), 37.

1988

Guidelines on Intergenerational Equity, prepared by UNU Experts Group, Goa, 15 February 1988; 18 *EPL* (1988), 190 (1988 Goa Guidelines on Intergenerational Equity).

Regional Strategy for Environmental Protection and Rational Use of Natural Resources in ECE Member Countries Covering the Period up to the Year 2000 and Beyond, UN Economic Commission for Europe, Dec. E(431), 5 March 1988; E/ECE/1171, ECE/ENVA/5; Rüster & Simma 2nd, Vol. 1, I/F/08-05-79-a; Burhenne & Jahnke, *International Environmental Soft Law*, 988 : 1805; 18 *EPL* (1988), 175 (1988 ECE Environmental Strategy to the Year 2000 and Beyond).

Draft Articles on International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law, considered by the UN International Law

Commission at its 40th Session, 1988 *YbILC* Vol. II, Pt. 1, 254 (**First (1988) ILC Draft Articles on International Liability**).

Resolution on the Protection of Global Climate for Present and Future Generations of Mankind, UNGA, A/Res./43/53, 6 December 1988, GAOR 43rd Session, Supplement No. 49 (A/43/49); Rüster & Simma 2nd, Vol. 4, VI/C/06-12-88; 28 *ILM* (1989), 1326 (**1988 Resolution Res./43/53, on the Protection of Global Climate for Present and Future Generations of Mankind**).

Regional Strategy for Environmental Protection and Rational Use of Natural Resources in ECE Member Countries Covering the Period up the Year 2000 and Beyond, ECE Dec. E(431); 18 *EPL* (1988)175 (**1988 Regional Strategy for Environmental Protection and Rational Use of Natural Resources in ECE Member Countries Covering the Period up the Year 2000 and Beyond**).

1989

Cooperation in the Field of the Economics of Science and Technology and the Environment, extracts from the Conference on Security and Cooperation in Europe, 1989 Concluding Document of the Third Follow-up Meeting, Vienna, 15 January 1989; Burhenne & Jahnke, *International Environmental Soft Law*, 989 : 0505; 28 *ILM* (1989), 527; relevant extracts in 19 *EPL* (1989), 31 (**1989 Vienna Concluding Document of CSCE Third Follow-up Meeting, Section on Cooperation in the Field of the Economics of Science and Technology and the Environment**).

Recommendation Concerning an Environmental Checklist for Development Assistance, OECD Council Recommendation C(89)2, 22 February 1989; Rüster & Simma 2nd, Vol. 1, I/F/22-02-89; 28 *ILM* (1989), 1314 (**OECD Recommend. C(89)2 Concerning an Environmental Checklist for Development Assistance**).

Hague Declaration on the Environment, adopted by the Hague Summit on Global Environmental Issues, the Hague, 11 March 1989; Rüster & Simma 2nd, Vol. 4, VI/B/11-03-89; 28 *ILM* (1989), 1308; 19 *EPL* (1989), 78.

Brasilia Declaration on the Environment, adopted by the Latin American and Caribbean Summit, Brasilia, 31 March 1989; Rüster & Simma 2nd, Vol. 1, I/B/31-03-89; 28 *ILM* (1989), 1311; 19 *EPL* (1989), 135.

Recommendation on Water Resource Management Policies: Integration, Demand Management, and Groundwater Protection, OECD Council Recommendation C(89)12, 31 March 1989; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 30e (**OECD Recommend. C(89)12, on Water Resource Management Policies**).

Draft Articles on International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law, considered by the UN International Law Commission at its 41st Session, 1989 *YbILC* Vol. II, Pt. 1, 134 (**1989 Revised Draft Articles on International Liability**).

Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, adopted by the UN International Law Commission at its 41st Session; 1988 *YbILC* (1988) Vol. II Pt.2, 35 (1988 ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses).

Amazon Declaration, adopted by Amazon Basin States, Manaus, 6 May 1989; Rüster & Simma 2nd, Vol. 1, I/B/06-05-89; 28 *ILM* (1989) 1303.

Declaration on Sustainable Development in Africa, adopted by the First African Regional Conference on Sustainable Development in Africa, Kampala, 12-16 June 1989; Rüster & Simma 2nd, Vol. 1, I/B/16-06-89-b; Burhenne & Jahnke, *International Environmental Soft Law*, 989 : 4505; 19 *EPL* (1989), 222 (1989 Kampala Declaration on Sustainable Development in Africa).

Application of the Polluter-Pays Principle to Accidental Pollution, OECD Council Recommend. adopted at its 712th Session, 7 July 1989; Burhenne & Jahnke, *International Environmental Soft Law*, 989 : 5105; 28 *ILM* (1989), 1320; 19 *EPL* (1989), 1984.

Paris Economic Declaration, issued by the Economic Summit of the Arch of the Seven Major Industrialised Democracies, Paris, 16 July 1989; Rüster & Simma 2nd, Vol. 1, I/B/16-07-89; 28 *ILM* (1989), 1293; section on the environment in 19 *EPL* (1989), 183 (1989 Paris Economic Declaration of the G7).

Belgrade Declaration, adopted by the 9th Conference of the Heads of State or Government of Non-Aligned Countries, Statement on the Environment, 7 September 1989; Rüster & Simma 2nd, Vol. 1, I/B/07-09-89 (1989 Belgrade Declaration of the G77).

Langkawi Declaration on Environment, adopted by Commonwealth Heads of Government Meeting, Langkawi, 21 October 1989; Rüster & Simma 2nd, Vol. 1, I/B/21-10-89; Burhenne & Jahnke, *International Environmental Soft Law*, 989 : 7805; Churchill & Freestone, *International Law and Global Climate Change* (Graham & Trotman/Nijhoff, 1991), 311; 5 *American University JIL & Policy* (1990), 589 (1989 Langkawi Declaration of the Commonwealth Heads of Governments).

Recommendations on the Protection of the Environment, drafted at the Conference on Security and Cooperation in Europe, Meeting on the Protection of the Environment, Sofia, 16 October - 31 December 1989; Rüster & Simma 2nd, Vol. 1, I/B/03-11-89; 20 *EPL* (1990), 107 (1989 Sofia Recommendations on the Protection of the Environment).

Declaration on Atmospheric Pollution and Climate Change, adopted by the Ministerial Conference on Atmospheric Pollution and Climate Change, 5-7 November 1989, Noordwijk; 19 *EPL* (1989) 229; 5 *American University JIL & Policy* (1990), 592 (1989 Noordwijk Declaration on Atmospheric Pollution and Climate Change).

Draft American Declaration on the Environment, prepared by the Inter-American Juridical Committee, Doc. CJI/Res.II-2/89; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 40a.

Resolution on United Nations Conference on Environment and Development, UNGA Res. A/44/228, 22 December 1989, GAOR 44th Session, Supplement No. 49 (A/44/49) (1989 Resolution 44/228, on United Nations Conference on Environment and Development).

Resolution on International Cooperation in the Field of the Environment, UNGA Res. A/44/229, 22 December 1989, GAOR 44th Session, Supplement No. 49 (A/44/49) (1989 Resolution 44/229, on International Cooperation in the Field of the Environment).

1990

Draft Articles on International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law, considered by the UN International Law Commission at its 42nd Session, 1990 *YbILC* Vol. II, Pt. 1, 105 (1990 ILC Draft Articles on International Liability).

Conclusion of the Siena Forum on International Law of the Environment, Siena, 21 April 1990; 20 *EPL* (1990), 232; 1 *YbIEL* (1990), 696.

Bergen Ministerial Declaration on Sustainable Development and Bergen Joint Agenda for Action, adopted at UN Economic Commission for Europe Regional Conference on 'Action for a Common Future', Bergen, 14-16 May 1990; Ruster & Simma 2nd, Vol. 1, I/B/16-05-90; Burhenne & Jahnke, *International Environmental Soft Law*, 990 : 3605 and 3705; 20 *EPL* (1990), 100; 1 *YbIEL* (1990), 429.

Code of Conduct on Accidental Pollution of Transboundary Inland Waters, UN Economic Commission for Europe Dec. C(45), 1 June 1990; Burhenne & Jahnke, *International Environmental Soft Law*, 990 : 4105 (1990 ECE Code of Conduct on Accidental Pollution of Transboundary Inland Waters).

Kuala Lumpur Accord on Environment and Development, issued at the Fourth ASEAN Meeting for Ministers for the Environment, Kuala Lumpur, 19 June 1990; 21 *EPL* (1991), 267.

Formulation of a European Charter on Environmental Protection and Sustainable Development, Council of Europe, Recommend. 1130, 28 September 1990; Ruster & Simma 2nd, Vol. 1, I/G/28-09-90-a; 1 *YbIEL* (1990), 484; Hohmann (ed.), *Basic Documents*, Vol. 1, Doc. 40d.

Draft European Conservation Strategy, Council of Europe, Recommendation adopted at the Sixth of the European Environment Ministers of the 23 Member Countries of the Council of Europe, Brussels, 11-12 October 1990; Ruster & Simma 2nd, Vol. 4, VI/B/07-11-89; 20 *EPL* (1990), 243 (1990 Draft European Conservation Strategy).

Bangkok Ministerial Declaration on Environmentally Sound and Sustainable Development in Asia and the Pacific, adopted by Economic and Social Commission for Asia and Pacific, Bangkok, 15-16 October 1990; reproduced in Hohmann (ed.), *Basic Documents* Vol. I, Doc. 38a (1990 Bangkok Ministerial Declaration on Sustainable Development).

Ministerial Declaration, issued by the Second World Climate Conference, Geneva, 29 October-7 November 1990; Burhenne & Jahnke, *International Environmental Soft Law*, 990 : 8405; 20 *EPL* (1990), 220; 1 *YbIEL* (1990), 473.

International Development Strategy for the Fourth United Nations Development Decade, UNGA, A/Res/45/199, 21 December 1990, GAOR 45th Session, Supplement No. 49 (A/45/49) (1990 Strategy for the Fourth Development Decade).

1991

Use of Economic Instruments in Environmental Policy, OECD Council Recommend. C(90)177, 31 January 1991; Burhenne & Jahnke, *International Environmental Soft Law*, 991 : 0916; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 25d.

Bamako Commitment on Environment and Development, made by the Ministers of the Environment of the Member States of the Organization of African Unity, Bamako, 28-30 January 1991; 21 *EPL* (1991), 99.

Recommendation on Integrated Pollution Prevention and Control, OECD Council Recommend. C(90)164, 31 January 1991; Burhenne & Jahnke, *International Environmental Soft Law*, 991 : 0905; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 30f; 21 *EPL* (1991), 91 (OECD Recommend. C(90)164, on Integrated Pollution Prevention and Control).

Tlatelolco Platform on Environment and Development, adopted by the Regional Preparatory Meeting of the Latin American and Caribbean ECLAC, Mexico City, 4-7 March 1991; Burhenne & Jahnke, *International Environmental Soft Law*, 991 : 1805; 21 *EPL* (1991), 181; Hohmann, *Basic Documents*, Vol.1, Doc. 38b.

Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, adopted by the UN International Law Commission at its 43rd Session; 1991 *YbILC* (1991) Vol. II Pt.2, 66; Burhenne & Jahnke, *International Environmental Soft Law*, 991 : 3205 (1991 ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses).

Beijing Ministerial Declaration on Environment and Development, adopted at the Ministerial Conference of Developing Countries on Environment and Development, Beijing, 19 June 1991; Burhenne & Jahnke, *International Environmental Soft Law*, 991 : 4605; 21 *EPL* (1991) 267.

The Hague Recommendations issued by the International Conference on Environmental Law, The Hague, 16 August 1991; relevant extracts in 21 *EPL* (1991), 276)

Draft Charter on Environmental Rights and Obligations, adopted at the UN Economic Commission for Europe Experts Meeting, Oslo, 29-31 October 1990, and presented to UN Economic Commission for Europe Senior Advisers in 1991; 21 *EPL* (1991), 81; Hohmann (ed.), *Basic Documents*, Vol.1, Doc. 40b (1991 ECE Draft Charter on Environmental Rights and Obligations).

Environmental Policy Statement, issued by OECD Ministers of Environment and Development Cooperation, 3 November 1991, Paris; Burhenne & Jahnke, *International Environmental Soft Law*, 991: 9085 (1991 OECD Environmental Policy Statement).

Good Practice For Country Environmental Surveys and Strategies, endorsed by OECD Ministers of Environment and Development Cooperation, OECD/GD(91)199, Paris, 3 December 1991; Burhenne & Jahnke, *International Environmental Soft Law*, 991 : 9005 (1991 OECD Guidelines on Environment and Aid).

Good Practice For Country Environmental Impact Assessment of Development Projects, endorsed by OECD Ministers of Environment and Development Cooperation, OECD/GD(91)200, Paris, 3 December 1991; Burhenne & Jahnke, *International Environmental Soft Law*, 991 : 9015 (1991 OECD Guidelines on Environmental Impact Assessment).

1992

Declaration on Euro-Mediterranean Cooperation, issued at Second Ministerial Conference on Euro-Mediterranean Cooperation on the Environment in the Mediterranean Basin, Cairo, 28-30 April 1992; 22 *EPL* (1992), 193.

Rio Declaration on Environment and Development, adopted by the United Nations Conference on Environment and Development and attached Agenda 21, Rio de Janeiro, 3-4 June 1992, A/CONF.151/26/Rev.1 (Vol.I); Burhenne & Jahnke, *International Environmental Soft Law*, 992 : 4405 to 4979; 31 *ILM* (1992), 876; 3 *YbIEL* (1992), 835 (1992 Rio Declaration on Environment and Development & 1992 Agenda 21).

Non-Legally-Binding Authoritative Statement of Principles for Global Consensus on the Management, Conservation and Sustainable Development of all Type of Forests, Rio de Janeiro, June 13, 1992, A/CONF.151/26/Rev.1 (Vol.I); Burhenne & Jahnke, *International Environmental Soft Law*, 992 : 4435; 31 *ILM* (1992), 882; 3 *YbIEL* (1992), 830 (1992 Forestry Principles).

Decision VIII on the Environment, taken at the Summit of the Conference on Security and Cooperation in Europe, Helsinki, 10 July 1992; 31 *ILM* (1992), 1416 (1992 CSCE Decision VIII on the Environment).

Resolution establishing the Commission on Sustainable Development, UNGA A/Res./47/191, 22 December 1992; Birnie & Boyle, *Basic Documents on International Law and the Environment*, 658.

1993

Lucerne Declaration, issued by the Ministers of the Environment of the Region of UN Economic Commission for Europe and the Member of the Commission of the European Communities Responsible for the Environment, Lucerne, 30 April 1993; Burhenne & Jahnke, *International Environmental Soft Law*, 993 : 3205; 23 *EPL* (1993), 185 (1993 **ECE Lucerne Declaration**).

Declaration on Human Rights and attached and Programme of Action, adopted by the World Conference on Human Rights, Vienna, 25 June 1993, UN Doc.A/CONF.157/23; 32 *ILM* (1993), 1661 (1993 **Vienna Declaration on Human Rights, and Vienna Programme of Action**).

Delhi Declaration on Forests, adopted by the First Ministerial Conference of the Forestry Forum for Developing Countries, New Delhi, 1-3 September 1993; Burhenne & Jahnke, *International Environmental Soft Law*, 993 : 6605; 24 *EPL* (1994), 201.

European Energy Charter, concluding document of the European Energy Charter Conference, the Hague, 16-17 December 1991.

1994

Ministerial Declaration on Long-Range Transboundary Air Pollution, adopted at a Special Session of the Executive Body for the Convention on Long-Range Transboundary Air Pollution, 13-14 June 1994; Burhenne & Jahnke, *International Environmental Soft Law*, 993 : 4505.

Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, adopted by the UN International Law Commission at its 46th Session, 24 June 1994; Burhenne & Jahnke, *International Environmental Soft Law*, 994 : 4705; 5 *YbIEL* (1994), 891; 24 *EPL* (1994), 335 (1994 **ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses**).

Draft United Nations Declaration on the Rights of Indigenous Peoples, adopted by UN Sub-Commission on the Prevention and Protection of Minorities, 26 August 1994; 34 *ILM* (1995), 541.

Tunis Declaration for Sustainable Development in the Mediterranean Basin, adopted by the Conference 'Med 21' on Sustainable Development in the Mediterranean, held in Tunis, on 1 November 1994; the full text of the Declaration is reproduced in 4 *ICCOPS Newsletter* (1995), at 7.

Policy Statement on Sustainable Development, issued by Ministers of Environment and Development Co-operation, Heads of Agencies and a Commissioner of the E.C., OECD Paris, 2-3 December 1994; 22 *EPL* (1995), 56.

Budapest Declaration on a Genuine Partnership on a New Era, issued by the Summit of the Conference on Security and Cooperation in Europe, Budapest, 6 December 1994; 34 *ILM* (1995), 767 (1994 CSCE Budapest Summit Declaration).

Miami Declaration of Principles, Partnership for Development and Prosperity: Democracy, Free Trade and Sustainable Development in the Americas, adopted at the Summit of the Americas, Miami, 11 December 1994; 34 *ILM* (1995), 810; 6 *Department of State Dispatch* (1995), Suppl. 2 (1994 Miami Declaration of Principles).

1995

Declaration for Social Development, and attached Programme of Action, adopted by the World Summit for Social Development, Copenhagen, 6-12 March 1995, UN Doc.A/CONF.166/9; extracts in 36/1 *Indian JIL* (1996), 104 (1995 Copenhagen Declaration/Programme for Social Development).

Declaration on the Sustainable Development in Mediterranean, Tunis, 22 April 1995; Burhenne & Robinson (eds.), *International Protection of the Environment: Conservation in Sustainable Development*, booklet 22-04-95/1; 4 *ICCOPS Newsletter* (1995), 7 (1994 Declaration of Tunis on the Sustainable Development of the Mediterranean).

Declaration for the Advancement of Women, and attached Platform for Action, adopted by the Fourth World Conference on Women, Beijing, 15 September 1995, UN Doc.A/CONF.177/20; 35 *ILM* (1996), 401 (1995 Beijing Declaration/Platform for Action for the Advancement of Women).

Guidelines on Access to Environmental Information and Public Participation in Environmental Decision-Making, drafted by ECE Working Group of Senior Officials, at the Ministerial Conference on Environment for Europe, Sofia, Bulgaria, 23-25 October 1995; Burhenne & Jahnke, *International Environmental Soft Law*, 995 : 8005.

Sofia Declaration, issued by the Ministers of the Environment of the Region of UN Economic Commission for Europe and the Member of the Commission of the European Communities Responsible for the Environment, Sofia, 23-25 October 1995; Burhenne & Jahnke, *International Environmental Soft Law*, 995 : 8011.

Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, adopted by an Intergovernmental Conference, Washington, D.C., 23 October-3 November 1995; Burhenne & Jahnke, *International Environmental Soft Law*, 995 : 8231.

Code of Conduct for Responsible Fisheries Management, drafted by the Food and Agriculture Organisation, version as to the 1 November 1995; Burhenne & Jahnke, *International Environmental Soft Law*, 995 : 8205.

IUCN Draft International Covenant on Environment and Development, prepared by the Commission on Environmental Law of the IUCN in co-operation with the International Council of Environmental Law, Environmental Policy and Law Paper No 31 (IUCN, Gland, Switzerland, 1995).

1996

Environment Policy Communiqué, issued by OECD, February 1996; extracts in 26 *EPL* (1996), 130.

Draft Articles on International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law, considered by the UN International Law Commission at its 48th Session; in UNGA, Report of the ILC on Its Work of its 48th Session (May 6-July 26, 1996), GAOR Fifty-first Session, Supplement No.10 (A/51/10), 238 (1996 ILC Draft Articles on International Liability).

Draft Articles on State Responsibility, considered by the UN International Law Commission at its 48th Session; in UNGA, Report of the ILC on Its Work of its 48th Session (May 6-July 26, 1996), GAOR Fifty-first Session, Supplement No.10 (A/51/10), 125; 37 *ILM* (1998), 442 (1996 ILC Draft Articles on State Responsibility).



CHAPTER ONE INTRODUCTION

1. <u>Introduction</u>	1
2. <u>General Framework of Research</u>	3
i. Conceptual Framework.....	3
ii. Approach and Methodology	17
iii. Legal Framework.....	21
iv. Terminological Clarifications.....	38
3. <u>Evolutionary Perspective of Sustainable Development</u>	39
i. Sustainable Development and Equilibrium State.....	39
ii. Environment versus Development.....	42
iii. Sustainable Development.....	46

1. Introduction

When a topic of research in the area of international environmental law was chosen, over three years ago, sustainable development imposed itself quite naturally. Increasingly frequently referred to both in international environmental law instruments and in the doctrine, sustainable development has nonetheless remained poorly developed in terms of its meaning and practical implications⁽¹⁾. The point has been

(1) Reference to sustainable development in international environmental law instruments are worded in generic terms, without any further indication being given as to an interpretation or understanding of the expression; see *infra* 2/i. Conceptual Framework. In the doctrine, the various books and contributions devoted to sustainable development have cautiously avoided to elaborate the expression in depth -other than merely referring to the now classic work of the World Commission on Sustainable Development (see *infra* 3/iii. Sustainable Development)-, and focus instead on other (related) developments of international environmental law contemporaneous to the introduction of sustainable development in the international legal order; see for instance Campiglio *et al.* (eds.), *The Environment after Rio, International Law and Economics* (Graham & Trotman/Martinus Nijhoff, 1994); Cançado Trindade, (ed.), *Human Rights, Sustainable Development and Environment* (Instituto Interamericano de Desarrollo, 1995); Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995); Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, 1995); Saunders (ed.), *The Legal Challenge of Sustainable Development, Essays from the Fourth Institute Conference on Natural Resources Law*, (Canadian Institute of Resource Law, 1990); UNEP (ed.), *UNEP's New Way Forward : Environmental Law and Sustainable* (UNEP, 1995). See also Bates, 'The Legal Implications of Sustainable Development', 108 *Science of the Total Environment* (1991), 97; (continued)

reached where it is a commonly used expression, yet an extremely ill-defined expression with no clear normative implications -if any- attached thereto. The lack of consistency in the qualification of sustainable development is but an illustration of the state of confusion surrounding the expression⁽²⁾.

The original ambition of the thesis was to shed some light on a poorly understood expression at the heart of contemporaneous international law of the environment. The proposed research soon proved as vain as Donnelly's search for a 'non-existent black cat in a dark room on a moonless night'⁽³⁾. Sustainable development has not been introduced into international environmental law as a well defined expression, associated with specific implications susceptible of strict application and enforcement. Accordingly any specific international legal construction of sustainable development would necessarily be based on assumptions and hypotheses, and might fail to reflect reality. In fact, international law cannot define 'sustainable development'; it can but reflect how sustainable development was integrated, more particularly into the area of the environment, and what was the impact of this notion on its evolution⁽⁴⁾.

Abandoning the idea of a *deduction* of the meaning and implications of sustainable development, we opted finally for a more *inductive* approach, and tried to identify certain facets and some limits of sustainable development from the detailed study of arbitrarily selected principles of international environmental law often associated with

Brundtland, 'Sustainable Development: the Challenge Ahead', in Stokke (ed.), *Sustainable Development* (Frank Cass, 1991), 32; Epiney & Scheyli, 'Le concept de développement durable en droit international public', 7 *Schweizerisches Zeitschrift für Internationales & Europäisches Recht* (1997), 247; Hoelting, 'After Rio: The Sustainable Development Concept Following the United Nations Conference on Environment and Development', 24 *Georgia JICL* (1994), 117; Hohmann, 'Environmental Implications of the Principle of Sustainable Development and their Realization in International Law', in Chowdhury *et al.* (eds.), *The Right to Development in International Law* (Martinus Nijhoff, 1992), Chap. 3.4; Jositsch, 'Das Konzept der nachhaltigen Entwicklung (Sustainable Development) im Völkerrecht und seine innerstaatliche Umsetzung', 11 *Umweltrecht in der Praxis* (1997), 93; Schröder, 'Sustainable Development - Ausgleich zwischen Umwelt und Entwicklung als Gestaltungsaufgabe der Staaten', 34 *AVR* (1996), 251; Yusuf, 'International Law and Sustainable Development: The Convention on Biological Diversity', 2 *African YbIL* (1994), 109. Other scholarly contributions follow a similar approach as that taken in this thesis, and decompose sustainable development into a series of basic principles of law, without offering a really global perspective of sustainable development as such; Dommen, *Fair Principles for Sustainable Development* (Edward Elgar, for UNCTAD, 1993); Hossain, 'Evolving Principles of Sustainable Development and Good Governance', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 1; Sands, 'International Law in the Field of Sustainable Development', 65 *British YbIL* (1994), 303.

(2) See *infra* 2/i. Conceptual Framework.

(3) Donnelly, 'In Search of the Unicorn: The Jurisprudence and Politics of the Right to Development', 15 *California Western ILJ* (1985), 473.

(4) Boyle, 'Economic Growth and Protection of the Environment: the Impact of International Law and Policy', in Boyle (ed.), *Environmental Regulation and Economic Growth*, (Clarendon, 1994), Chap. 8, at 179.

sustainable development⁽⁵⁾. Some of them are classic principles of international environmental law⁽⁶⁾, others have been introduced more recently and developed essentially in relation to sustainable development⁽⁷⁾.

The final goal of the thesis is to come out with a partial picture of what sustainable development means (or does not mean) in the restricted context of international environmental law. To do so, it will try to identify in which respect and how far sustainable development has influenced and has been reflected in the evolution of some selected principles. Each principles is thus considered in an evolutionary perspective, from the time of its inception to the time of its 'association' to sustainable development.

2. General Framework of Research

i. Conceptual Framework

Before embarking on the subject matter of the thesis, a number of practical and theoretical points that have shaped both the form and the content of the research, or influenced the general approach, call for some remarks.

1) First, it is important to underline that sustainable development was not originally embedded in law, nor was it embedded in environmental discourse⁽⁸⁾; it initially emerged in the politico-economic discourse⁽⁹⁾ and was subsequently applied to,

⁽⁵⁾ On the rationale behind the principles selected, see *infra* 2/ii. Approach and Methodology; on the legal significance of these principles, *infra* 2/i. Conceptual Framework.

⁽⁶⁾ See Chap. 2, Permanent Sovereignty over Natural Resources, and Chap. 3, Prevention and Precautionary Principles.

⁽⁷⁾ See Chap. 4, Intergenerational Equity, and to a certain extent, Chap. 5, Principle of Partnership, and Chap. 6, Principle Pertaining to Public Participation.

⁽⁸⁾ Although it is sometimes suggested that the notion of 'sustainable utilisation' was first employed by scientists of forestry as early as in the second part of the eighteenth century; Beyerlin, 'The Concept of Sustainable Development', in Wolfrum (ed.), *Enforcing Environmental Standards: Economic Mechanisms as Viable Means ?* (Springer, 1996), 95, at 96 n. 4; Jositsch, *supra* n. 1, at 96.

⁽⁹⁾ *Infra* 3. Evolving Perspective of Sustainable Development. For an economic perspective of sustainable development, consult for instance Munasinghe, *Environmental Economics and Sustainable Development, World Bank Environment Paper No. 3* (World Bank, 1994); Pearce & Warford, *World Without End, Economics, Environment and Sustainable Development* (The World Bank, 1993); Pearce *et al.*, *Sustainable Development: Economics and Environment in the Third World* (E. Elgar, 1990); see also Dubourg & Pearce, 'Paradigms for Environmental Choices: Sustainability versus Optimality', in Faucheux *et al.* (eds.), *Models of Sustainable Development, New Horizons in Environmental Economics* (Edward Elgar/Brookfield, 1996), Chap. 2; Pearce, 'An Economic Perspective on Sustainable Development', 2 *Development, Journal of SID* (1989), 17; see also more briefly Hammond, 'Is There Anything New in the Concept of Sustainable Development ?', in Campiglio, *et al.* (eds.), *The Environment after Rio, International Law and Economics* (Graham & Trotman/Martinus Nijhoff, 1994), Chap. 13. For a comparison of the understanding of sustainable development between economists and ecologists, see Tisdell, 'Sustainable Development: Differing Perspectives of Ecologists and Economists, (continued)

and developed in the most diverse legal and non legal⁽¹⁰⁾ matters. The complexity of sustainable development is more particularly epitomised by the variety of issues pertaining to social development and human welfare, to economics, politics, as much as to environmental protection, considered under the set 'international agenda to promote sustainable development in the twenty-first century'⁽¹¹⁾. In the legal context, it was more particularly used with respect to economic development, human rights and social development⁽¹²⁾, and the environment⁽¹³⁾; the assumption must be abandoned however, that sustainable development is exclusively about the environment. Even though the various dimensions are closely interrelated and the core meaning of sustainable development remains invariably the same, *viz.* continuity and self-perpetuation⁽¹⁴⁾, sustainable development still means different things in different contexts⁽¹⁵⁾.

This thesis contemplates essentially the *environmental* dimension of sustainable development, under the restrictive angle of international environmental *law*. The author

and Relevance to LDCs', 16 *World Development* (1988), 373. On a general conception of sustainable development in environmental politics, see Carley, & Christie, *Managing Sustainable Development* (Earthscan, 1994); Dobson, *Green Political Thought* (Routledge, 1990), Chap. 3; and selected writings in Kirkby, *et al.* (eds.), *The Earthscan Reader in Sustainable Development* (Earthscan, 1995). For more critical perspective, see authors *infra* n. 37. See also bibliography of Marien, 'Environmental Problems and Sustainable Futures, Major Literature from WCED to UNCED', 24 *Future* (1992).

(10) Such as architecture, see for instance Popovic *et al.*, 'Sustainable Roundwood Reciprocal Frame 'RF' Structures', in Emmitt (ed.), *Detail Design In Architecture*, Proceedings of the International Conference held in North Hampton, 1996 (BRC, 1996), 175; geography, see for instance Manshard, 'New Global Environment Programmes and Sustainable Development. A Geographical Perspective', 20 *Geographical Journal* (1990), 151. Sustainable development has also a certain currency in relation to health, as illustrated by the paper delivered by B.S. Polla, from Paris V and Geneva University, on 'Le développement durable et la santé', at the seminar organised by the Centre d'Ecologie Humaine et des Sciences de l'Environnement/Geneva University, *Développement durable*, First Part, Geneva, 12-13 March 1998.

(11) 1992 Agenda 21, Para. 1.6.

(12) See most notably Cançado Trindade, 'Relations Between Sustainable Development and Economic, Social and Cultural Rights: Recent Developments', in Al-Nauimi & Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, 1995), 1051; Singh, 'Sustainable Development as a Principle of International Law', in De Waart *et al.* (ed.), *International Law and Development* (Martinus Nijhoff, 1988), Chap. 1.1.

(13) ILA sub-division of its International Committee on Legal Effects of Sustainable Development into three sub-committees respectively on sustainable development and the environment, *Sustainable Development and Good Governance* (that includes human rights) and sustainable development and international economic order, epitomises particularly clearly the complexity of sustainable development and its relevance in the area identified in the text; see ILA, *Report of the sixty-sixth Conference*, Buenos Aires, 1994, 111, at 113. See also McGoldrick, 'Sustainable Development and Human Rights: An Integrated Conception', 45 *ICLQ* (1996), 796, for a particularly clear, temple-like presentation of the three main legal dimensions of sustainable development and their close inter-relation.

(14) See definitions *infra*.

(15) Saunders, (ed.), *The Legal Challenge of Sustainable Development, Essays from the Fourth Institute Conference on Natural Resources Law* (Canadian Institute of Resource Law, 1990), Part. I.

is well aware of the paradox, perhaps even the contradiction of isolating on *one* dimension only of a notion which is essentially about integration and globalisation. Such focus, needless to say, was commanded by pure reason of manageability of the research.

Sustainable development is indeed at the cross-road of science, politics, economics and law; in law, it straddles human rights law, economic law and environmental law. Sustainable development confronts any potential researcher with a complex web of endless interrelations. In order not to go astray in our study of sustainable development, it seemed imperative to narrow down our scope as much as possible. Unavoidable references are made throughout the thesis to the economic dimension of sustainable development in relation to the specific needs of developing States with respect to environmental protection, and are elaborated upon only insofar as required for a clear evaluation and understanding of the environmental dimension⁽¹⁶⁾. Certain aspects of the human rights dimension are touched upon in the chapter addressing the public participation in sustainable development⁽¹⁷⁾. This focus has both conditioned the structure of the thesis and influenced the selection of the bibliography.

It is also important to bear in mind that the conclusions reached in this research apply only to this specific dimension viewed under this specific perspective, and do not necessarily apply by analogy to the other dimensions⁽¹⁸⁾. It is probable that completely different conclusions would have been reached under a different perspective. To human rights lawyers for instance, sustainable development might be perceived as promising, insofar as it offers an opportunity to expand a new dimension of classic human rights, or to invoke classic human rights in relation to environmental pollution and degradation. Lawyers more particularly concerned with economic development and trade issues might well find the reference to sustainable development in recent trade instruments as a worrying intrusion of environmental values into economic relations and a potential new threat to free trade.

Again for pure reasons of manageability of the work, the major focus within the environmental dimension was put upon the substantive, as opposed to the 'institutional' dimension of sustainable development. It was rightly underlined however, that «the legal implications of sustainable development are as much about process and institutional arrangements, as they are about substantive norms»⁽¹⁹⁾. Without prejudice to the

(16) Most particularly Chap. 2, 3 and 5.

(17) *Infra* Chap. 6.

(18) This remark concerns more particularly to the conclusions reached under Chap. 6.4 and 6.5.

(19) 'Sustainable Development: the Challenge to International Law', Report of A Consultation Convened by the Foundation for International Environmental Law and Development with the support of the Ford
(continued)

importance of the institutional dimension, the thesis concentrates on the *substantive* norms, and shall refer to *institutional* implications only when the coherence of the thesis requires it⁽²⁰⁾.

2) Sustainable development is designated in the doctrine and in international environmental law instruments alternatively, and with little consistency, *inter alia*, in terms of strategy⁽²¹⁾, approach⁽²²⁾, policy⁽²³⁾, goal⁽²⁴⁾, objective or 'meta-objective'⁽²⁵⁾.

Foundation, St. George's House, Windsor Castle, England, 27-29 April 1993; reproduced in 2 *RECIEL* (1993), r.1, at r.6.

(20) Specifically on the institutional dimensions of sustainable development, see for instance Report *supra* n. 19, r.6 *et sequ.*; Handl, 'Controlling Implementation of and Compliance with International Environmental Commitments: The Rocky Road from Rio', 5 *Colorado JIELP* (1994), 305, at 317 *et sequ.*; Jordan, 'The International Organisational Machinery for Sustainable Development: Rio and the Road Beyond', Centre for Social and Economic Research of the Global Environment Working Paper 93-11, University of East Anglia, Norwich, 1993; Tinker, 'Making UNCED Work: Building the Legal and Institutional Framework for Sustainable Development at the Earth Summit and Beyond', United Nations Association of the United States of America Occasional Paper No. 4, UNA-USA, 1992; see also Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, 1995), Part III; Sands, 'International Law in the Field of Sustainable Development', 65 *British YbIL* (1994), 303, at 348 *et sequ.*

(21) 1994 Tropical Timber International Agreement, preambular Paras. 2 and 5; 1995 Miami Declaration of Principles.

(22) 1994 Desertification Convention, Art. 9.

(23) 1994 Planning and Sustainable Development Alpine Protocol, Art. 3.

(24) 1992 EU Treaty, Art. 2; 1993 North American Agreement of Environmental Cooperation, preambular Para. 1 and Art. 1(b); 1994 Desertification Convention, preambular Para. 8 and Art. 2; 1994 Planning and Sustainable Development Alpine Protocol, Arts. 1 and 8(1); 1994 Danube River Convention, Arts. 2 and 6; 1976/95 Barcelona Convention on Mediterranean Sea, Art. 4(2); 1994 Declaration of Tunis on the Sustainable Development of the Mediterranean, Para. 20; 1994 WTO Agreement, preambular Para. 1. See also 1990 Bergen Ministerial Declaration on Sustainable Development, Para. 10; 1991 Bamako Commitment on Environment and Development, preambular Para. 10; 1992 Forestry Principles, Preamble (b); Statement of Conclusions of the intermediate Ministerial Meetings on the Protection of the North Sea, Bergen, March 1997, Princ. 3.1 and 3.2; the Statement of Conclusions is posted on the North Sea Conference website @ <<http://odin.dep.no/md/publ/conf/soc.html>>. The 1986 EC Treaty refers to the sustainable economic and social development of developing countries without referring to the environment however. In the doctrine, see Handl, 'Environmental Security and Global Change', in Lang *et al.* (eds.), *Environmental Protection and International Law* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 2; Hoelting, *supra* n. 1, at 133; McGoldrick, *ibid. supra* n. 13; Simon, 'Sustainable Development: Theoretical Goal Construct of Attainable Goal?', 16 *Environmental Conservation* (1989), 41; Report of A Consultation Convened by the Foundation for International Environmental Law and Development, *supra* n. 19, at r.6. Rest refers to sustainable development as a 'Zielbegriff', thus combining the idea of goal (Ziel) and concept (Begriff); 'Die rechtliche Umsetzung der Rio-Vorgaben in der Staatenpraxis', 34 *AVR* (1996), 145, at 148.

(25) Ebbesson, *Compatibility of International and National Environmental Law* (Kluwer Law International, 1996), at 233.

Other frequent qualifications of sustainable development include that of a challenge⁽²⁶⁾, requirement⁽²⁷⁾, constraint⁽²⁸⁾, concept⁽²⁹⁾, framework⁽³⁰⁾, or process⁽³¹⁾.

Sustainable development is also labelled as an ethic⁽³²⁾, an ideal⁽³³⁾ or ideology⁽³⁴⁾, a policy paradigm⁽³⁵⁾, a myth⁽³⁶⁾, an inoperable self-contradictory theoretical

(26) 1990 Bergen Ministerial Declaration on Sustainable Development, Para. 6; Brundtland, 'Sustainable Development: the Challenge Ahead', in Stokke (ed.), *Sustainable Development* (Frank Cass, London, 1991), 32; Stokke, 'Sustainable Development: A Multi-Faceted Challenge', in Stokke (ed.), *ibid.*, 8.

(27) 1992 Biodiversity Convention, Art. 10(c).

(28) Handl, *ibid. supra* n. 24.

(29) 1989 Resolution 44/229, on International Cooperation in the Field of the Environment, Para. 11; 1990 The Hague Ministerial Declaration on the North Sea, Preamble, reproduced in are reproduced in Freestone & Ijlstra (eds.), *The North Sea; Basic Legal Documents on Regional Environmental Co-operation* (Graham & Trotman/Martinus Nijhoff, 1991); E/CN.17/1995/21, 30 March 1995, § 2. In the doctrine, see Beck, *Die Differenzierung von Rechtspflichten in den Beziehungen zwischen Industrie- und Entwicklungsländern. Eine völkerrechtliche Untersuchung für die Bereiche des internationalen Wirtschafts-, Arbeits- und Umweltrechts* (Peter Lang, 1994), at 209; Beyerlin, *supra* n. 8; Birnie & Boyle, 123; Boer, 'Implementation of International Sustainability Imperatives at the National Level', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 8; Epiney, 'Das "Verbot erheblicher grenzüberschreitender Umweltbeeinträchtigungen": Relikt oder konkretisierungsfähige Grundnorm?', 33 *AVR* (1995), 309, at 351; Epiney & Scheyli, *supra* n. 1; Hammond, *supra* n. 9; Hoelting, *supra* n. 1; see Hossain, 'Evolving Principles of Sustainable Development and Good Governance', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 1; Mann, 'The Rio Declaration', in 'Issues Relating to the 1992 Brazil Conference on the Environment', 86 *ASIL Proc.* (1992), 401, at 405 *et sequ.*; Matsui, 'The Road to Sustainable Development: Evolution of the Concept of Development in the UN', in Ginther *et al.* (eds.), *ibid.*, Chap. 3; Sands, *Principles*, Vol. I, 199, and 'International Law in the Field of Sustainable Development', 65 *British YbIL* (1994), 303; Pallemmaerts, 'La Conférence de Rio: Grandeur ou décadence du droit international de l'environnement?', 28 *RBDI* (1995), 175, at 221; Primrosch, 'The Spirit of Sustainable Development within Authoritative Decision-Making Processes', 47 *Austrian JPIL* (1994), 81; Salter, 'Environment, Sustainable Development and the Responsibilities of the Legal Profession', 16 *International Legal Practitioner* (1991), 75; Saunders, 'The Path to Sustainable Development: A Role for Law', in Saunders (eds.), *The Legal Challenge of Sustainable Development, Essays from the Fourth Institute Conference on Natural Resources Law* (Canadian Institute of Resource Law, 1990), 1; Tisdell, 'Sustainable Development: Differing Perspectives of Ecologists and Economists, and Relevance to LDCs', 16 *World Development* (1988), 373, at 375.

(30) 1994 Desertification Convention, preambular Para. 10 and Art. 5(b). See also WCED, *Our Common Future* (Oxford University Press, 1987), at 40.

(31) 1994 Tropical Timber International Agreement, Art. 1(c); 1976/95 Barcelona Convention on Mediterranean Sea, preambular Para. 7; see also McGoldrick, *ibid. supra* n. 13.

(32) Davidson & Barns, 'The Earth Summit and the Ethics of Sustainable Development', 1 *Current Affairs Bulletin* (1992), 4.

(33) Munn, 'Toward Sustainable Development', 26 *Atmospheric Environment* (1992), 2725; Primrosch, 'Das Vorsorgeprinzip im internationalen Umweltrecht', 51 *ZöR* (1996), 227, at 236.

(34) Report of A Consultation Convened by the Foundation for International Environmental Law and Development, *supra* n. 19, at r.6.

(35) Handl, *supra* n. 24, at 43; Robinson, 'Comparative Environmental Law: Evaluating How Legal Systems Address "Sustainable Development"', 27 *EPL* (1997), 338, at 339; in a more economic perspective, see also Dubourg & Pearce, 'Paradigms for Environmental Choices: Sustainability versus (continued)

construction⁽³⁷⁾, a 'simplistic formula'⁽³⁸⁾, a 'catchphrase'⁽³⁹⁾, a slogan⁽⁴⁰⁾ or a model⁽⁴¹⁾, or simply a 'new era'⁽⁴²⁾. More frequently, sustainable development is referred to as a mere issue⁽⁴³⁾, or a matter of interest⁽⁴⁴⁾, concern⁽⁴⁵⁾ or necessity⁽⁴⁶⁾. Sometimes regarded as a purely political umbrella⁽⁴⁷⁾, it is more often assimilated to an emerging⁽⁴⁸⁾, founding⁽⁴⁹⁾ or customary⁽⁵⁰⁾ legal principle, or simply to a legal principle⁽⁵¹⁾ or

Optimality', in Faucheux *et al.* (eds.), *Models of Sustainable Development, New Horizons in Environmental Economics* (Edward Elgar & Brookfield, 1996), Chap. 2.

(36) Lipschutz, 'Wasn't the Future Wonderful? Resources, the Environment and the Emerging Myth of Global Sustainable Development', 2 *Colorado JIELP* (1991), 35.

(37) Dovers & Handmer, 'Contradictions in Sustainability', 20 *Environmental Conservation* (1993), 217; Lipschutz, *supra* n. 36, at 40 *et sequ.*; O'Riordan, 'The new Environmentalism and Sustainable Development', 108 *The Science of the Total Environment* (1991), 5, at 13; Redclift, *Sustainable Development, Exploring the Contradictions*, (Routledge, 1987), Chap. 2 and 4; Simon, 'Sustainable Development: Theoretical Goal Construct of Attainable Goal?', 16 *Environmental Conservation* (1989), 41.

(38) Primrosch, 'The Spirit of Sustainable Development within Authoritative Decision-Making Processes', 47 *Austrian JPIL* (1994), 81, at 82.

(39) Lélé, 'Sustainable Development: A critical Review', 19 *World Development* (1991), 607.

(40) Anand, 'A New International Economic Order for Sustainable Development?', in Al-Nauimi & Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, 1995), 1209, at 1238.

(41) 1991 Tlatelolco Platform on Environment and Development, Para. 2; in the doctrine, see Goldenberg, 'Current Policies Aimed at Attaining a Model of Sustainable Development in Brazil', 1 *Journal of Environment and Development* (1992), 105.

(42) M'Gonigle, 'Developing Sustainability and the Emerging Norms of International Environmental Law: the Case of Land-Based Marine Pollution Control', 28 *Canadian YbIL* (1990), 169, at 171.

(43) 1990 Formulation of a European Charter on Environmental Protection and Sustainable Development, Council of Europe, Recommend. 1130, preambular Para. 4.

(44) 1989 Amazon Declaration, Para. 1.

(45) 1991 Beijing Ministerial Declaration on Environment and Development, preambular Para. 2, goes even as far as to consider sustainable development as a matter of common concern of mankind.

(46) 1989 Langkawi Declaration of the Commonwealth Heads of Governments, Para. 6.

(47) 1994 Declaration of Tunis on the Sustainable Development of the Mediterranean, *supra* n. 24, Para. 15; in the doctrine, Beyerlin, *supra* n. 8, at 107; Timoshenko, 'From Stockholm to Rio: the Institutionalization of Sustainable Development', in Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, 1995), Chap. 10, at 143 *et sequ.*

(48) Birnie & Boyle, 123; Sands, *Principles*, Vol. I, 128 and 208, and 'International Law in the Field of Sustainable Development', 65 *British YbIL* (1994), 303. Such understanding of sustainable development was endorsed by Dominicé, in his paper on 'Les Principes: leur portée et leur signification', delivered at a seminar organised by the Centre d'Ecologie Humaine et des Sciences de l'Environnement/Geneva University, *Développement durable*, First Part, Geneva, 12-13 March 1998.

(49) See Singh, *ibid. supra* n. 12.

principles⁽⁵²⁾; in other instances, sustainable development is considered as a 'legal institution'⁽⁵³⁾.

Sustainable development is understood as expressing alternatively an obligation of conduct⁽⁵⁴⁾, an obligation of result⁽⁵⁵⁾, or even a subjective, inalienable and peremptory right conferred upon States⁽⁵⁶⁾ or individuals, by the 'modern natural law of mankind' transcending customary and treaty law⁽⁵⁷⁾. It is more cautiously argued that the element of 'sustainability' in the expression of 'sustainable development' figures as a *candidate* for *jus cogens* with *erga omnes* effects⁽⁵⁸⁾. The neutral expression of 'promotion, achievement, pursuit of, or support for sustainable development' is most commonly used⁽⁵⁹⁾, which gives little indication as to the actual nature, let alone the normativity and legal qualification, of sustainable development.

(50) Hohmann, 'Ergebnisse des Erdgipfels von Rio', 12 *Neue Zeitschrift für Verwaltungsrecht* (1993), 311, at 312; Jositsch, 'Das Konzept der nachhaltigen Entwicklung (Sustainable Development) im Völkerrecht und seine innerstaatliche Umsetzung', 11 *Umweltrecht in der Praxis* (1997), 93, at 112.

(51) 1991 Alps Convention, Art. 2(1); 1992 European Economic Area Agreement, Preamble; see also Statement of Conclusions of the intermediate Ministerial Meetings on the Protection of the North Sea, Bergen, March 1997, *supra* n. 24, Princ. 2.2. In the doctrine, see Hunt, Bobeff & Palmer, 'Legal Issues Arising from the Principle of Sustainable Development: Australia, Canada and New-Zealand', 9 *Journal of Energy and Natural Resources Law* (1991), 1; McGoldrick, *supra* n. 13, at 818; Tinker, 'Making UNCED Work: Building the Legal and Institutional Framework for Sustainable Development at the Earth Summit and Beyond', United Nations Association of the United States of America Occasional Paper No. 4, UNA-USA, 1992, Chap. I.

(52) 1995 Sofia Declaration. In the doctrine, see Hossain, *ibid. supra* n. 29; Panjabi, 'From Stockholm to Rio : A Comparison of the Declaratory Principles of International Environmental Law', 21 *Denver JILP* (1993), 215.

(53) Luff, 'An Overview of International Law of Sustainable Development and A Confrontation Between WTO Rules and Sustainable Development', 29 *RBDI* (1996), 90, at 91.

(54) See 1990 Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Art. 3; 1992 ECE Watercourses Convention, preambular Paras. 4 and 6, and Arts. 2(2)(b) and 3(1)(i); 1992 Biodiversity Convention, preambular Paras. 5, 13, 20-23, and Arts. 8(g), 10(a), 11, 12, 13(b), and 19 (3); 1992 OSPAR Marine Environment Convention, preambular Para. 3.

(55) 1994 Desertification Convention, Art. 9.

(56) 1992 Climate Change Convention, Art. 3(4); see also 1992 Forestry Principles, Preamble (a).

(57) Singh, *ibid. supra* n. 12.

(58) Riedel, 'International Environmental Law - A Law to Serve the Public Interest? - An Analysis of the Scope of the Binding Effects of Basic Principles (Public Interest Norms)', in Delbrück (ed.), *New Trends in International Lawmaking - International 'Legislation' in the Public Interest* (Duncker & Humblot, 1997), 61, at 94-95; also Handl, 'Environmental Security and Global Change', in Lang *et al.* (eds.), *Environmental Protection and International Law* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 2.

(59) 1985 ASEAN Agreement on the Conservation of Nature, preambular Para. 3, and Art. 4; 1986 Noumea Convention on the Environment in the South Pacific, preambular Para. 6, and Art. 5(4); 1990 Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, preambular Para. 5; 1991 ECE
(continued)

Considering the open texture of sustainable development, and the lack of comprehensive elaboration of the terms since they were introduced in the international legal vocabulary, it can safely be concluded that any of the above qualifications is potentially appropriate to define sustainable development.

Borrowing from Dupuy's two-fold distinction between the various principles emerging in international environmental law⁽⁶⁰⁾, the thesis assimilates sustainable development to a '*principe inspirateur*' of international environmental law, that formulates less concrete obligations, and more a state of mind, or a general orientation of that law. It is 'fleshed out' by various '*principes directeurs*', setting forth more specific rules. The assimilation of sustainable development to a *principe directeur*, to a new rule or set of rules, or to obligation or set of obligations, in international law, is dismissed from the outset. It is virtually impossible to construe such a multi-faceted and open-textured expression as sustainable development with a sufficient degree of precision and clarity that would satisfy the too often neglected requirement of 'norm-creating

Convention on Environmental Impact Assessment, preambular Para. 2; 1992 EU Treaty, Art. B; 1992 Climate Change Convention, preambular Para. 22, and Arts. 2 and 3(4); 1992 Agreement Establishing the World Trade Organization, preambular Para. 1; 1992 ECE Industrial Accidents Convention, preambular Para. 2; 1992 Biodiversity Convention, Art. 8(a); 1992 OSPAR Marine Environment Convention, preambular Para. 3; 1994 Energy Charter Treaty, Art. 19(1); 1994 Desertification Convention, Art. 18(1); 1994 Protocol to the 1979 ECE Transboundary Air Pollution Convention, on Further Reduction of Sulphur Emissions, preambular Para. 14; 1994 Instrument Establishing the (restructured) Global Environmental Facility, preambular Para. 4; 1995 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, introductory Para. , preambular Para. 3, and Art. 1; 1997 Kyoto Protocol to the Climate Change Convention, Arts. 2(1), 10, and 12(2). See also 1975 Economic Charter, preambular Paras. 1 and 2; 1987 UNEP Guideline on Environmental Impact Assessment, preambular Para. 1; 1989 Hague Declaration on the Environment, Para. 9; 1989 Paris Economic Declaration of the G7, Sect. 2 and 37; 1990 Bergen Ministerial Declaration on Sustainable Development, Paras. 17 and 21; 1990 Bangkok Ministerial Declaration on Sustainable Development, Paras. 7, 10, 19, 24 and 30; 1991 Tlatelolco Platform on Environment and Development, Paras. 4, 9 and 14; 1992 Rio Declaration on Environment and Development, Princ. 1, 4, 11, 20, 21; 1992 Forestry Principles, Princ. 1, 3(a), 5(b), 6, 9, 10, 13(c), 14; 1993 Lucerne Declaration, Sect. 3; 1995 Policy Statement on Sustainable Development, Paras. 1, 3 and 5.

(60) Dupuy, 'Le droit international de l'environnement et la souveraineté des Etats', in Dupuy (ed.), *The Future of International Law of the Environment*, Hague Academy of International Law Workshop 1984 (Martinus Nijhoff, 1985), 29, at 39. Similar terminology was previously used *inter alia* by Sperduti, who referred to 'principes informateurs' (or 'inspireurs' or 'directifs') to designate basic principles of a legal order, and 'principe formateur' or 'normatif' to qualify more specific principles; 'L'individu et le droit international', 90 *RdC* (1956-II), 727, at 750-751. Dupuy's two-fold division has clearly inspired Kamto, 'Les nouveaux principes du droit international de l'environnement', *Revue Juridique de l'Environnement* (1993-1), 20. One should note however, that Dupuy considers the principle of permanent sovereignty over natural resources, the principle of solidarity and co-operation and that of equitable utilisation of natural resources as principes inspireurs, whilst in this thesis, these principles are treated as principes directeurs. Sperduti refers to principles of general application to international law, and, not surprisingly considering the early period, makes no reference to environmental law principles. Neither of them specifically associate or dissociate their 'principes' with or from the 'general principles recognized by civilized nations' in the sense of 1945 ICJ Statute, Art. 38(1)(c).

character' of international legal rules⁽⁶¹⁾. The requirement for a rule to qualify as candidate rule of international law was particularly clearly spelt out in *North Sea Continental Shelf* cases, where the ICJ stressed that «[i]t would in the first place be the necessary that the provision concerned should, at all events, potentially be of a *fundamentally norm-creating character* such as could be regarded as forming the basis of a general rule of law»⁽⁶²⁾.

It is not the pretension of this thesis to assimilate the principle of sustainable development or any of the five 'principes directeurs' considered to 'general principles of law recognized by civilized nations' in the sense of the 1945 ICJ Statute, Art. 38(1)(c)⁽⁶³⁾, notwithstanding the fact that certain principles have been or could be qualified as such⁽⁶⁴⁾. The terms 'principes directeurs', 'principes inspirateurs', or principles are used throughout the thesis to denote some basic legal standards, or rules with a large degree of abstraction and generality, common to the various sectors of international environmental law⁽⁶⁵⁾, that have been inferred from treaty or customary international environmental law, from judicial or arbitral decisions, and from state

(61) See in the same sense Beyerlin, *supra* n. 8, at 107; Birnie & Boyle, 123; Handl, *supra* n. 24, at 40 *et sequ.*; Lang, 'How to Manage Sustainable Development?', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 6, at 94 *et sequ.*; Sands, *Principles* Vol. I, 198 *et sequ.*, and 'International Law in the Field of Sustainable Development', 65 *British YbIL* (1994), 303; Stokke, 'Sustainable Development: A Multi-Faceted Challenge', in Stokke (ed.), *Sustainable Development* (Frank Cass, 1991), 8.

(62) *North Sea Continental Shelf, Judgment, ICJ Rep. 1969*, 3, Para. 72, emphasis added; the norm-creating character of a rule implies that the content and concrete implications of the latter are clear enough to allow the potential subject of the rule to foresee the consequence of their actions; see further van Dijk, 'Normative Force and Effectiveness of International Norms', 30 *German YbIL* (1987), 9.

(63) The identification, the functions and the status of the 'general principles of law recognized by civilized nations' in the general international law context have remained the object of a controversy in the doctrine, which has little to do with the topic of the present thesis. Extensive reference on the relevant literature can be found in Brownlie, *Principles*, 15 *et sequ.*; *Quoc Dinh: Droit International Public*, §§ 228 *et sequ.*; *Oppenheim's International Law*, Vol. 1, § 12. See contributions by Bastid, Blondel, Favre, Verdross and Virally in *Recueil d'études de droit international en hommage à Paul Guggenheim* (Faculté de Droit de l'Université de Genève & IUHEI, 1968).

(64) See for instance equitable principles, *infra* Chap. 2/4/ii/a. *Equitable utilisation, Sic Utere Tuo and Related No Substantial Transboundary Harm Principles*, arguably derived from 'general principles of law recognized by civilized nations'; *The Diversion of Water from the Meuse, PCIJ Ser. A/B*, Fascicule No 70, Judgment of June 28th, 1937, at 73 and 76. See also the principle of good faith, *infra* Chap. 3/4/ii. Prior Information, Notification and Consultation, qualified as «[o]ne of the basic principles governing the creation and performances of legal obligations...»; *Nuclear Tests (Australia v. France), Judgment of 20 December 1974, ICJ Rep. 1974*, 253, at 267-268; and the abuse of right or principle of non utilisation a right in a way detrimental to other States, regarded as a 'general and well-recognized principle'; *Corfu Channel case, Judgment of April 9th 1949: ICJ Rep. 1949*, 4, at 22. Reference to some other principles relevant to international environmental law is made in Birnie & Boyle, at 23-24; Sands, *Principles*, Vol. 1, at 123-124.

(65) Sands, *Principles*, Vol. 1, at 185; also Ferrari Bravo, 'Considérations sur la méthode de recherche des principes généraux du droit international de l'environnement', 7 *Hague YbIL* (1994), 3, at 4.

practice. This remark probably also applies to the frequent references to 'principles' in international environmental law documents and instruments, although the exact signification of such references remains extremely unclear, and is only evasively considered in the doctrine⁽⁶⁶⁾.

It should be stressed that sustainable development does not constitute a *new* discipline of international law, nor is it the subject matter of a *new* international law for sustainable development that would complement, or even replace, existing international environmental and developmental laws⁽⁶⁷⁾. Sustainable development is more a matter of

(66) Whilst the term 'principle' is frequently used in environmental law, and most notably in relation to sustainable development (see *supra* n. 48 to 52), and to precaution (*infra* Chap. 3), it is never clearly assimilated to or differentiated from the 'general principles of law' in the sense of 1945 ICJ Statute Art. 38(1)(c). Little indication as to the nature of the 'fundamental principles' enshrined in 1986 WCED-EG Legal Principles for Environmental Protection and Development and 1995 IUCN Draft International Covenant on Environment and Development is given in the commentary to both drafts. The latter merely provides that «the Fundamental Principles express the underlying legal norms in a declaratory form and constitute the basis for all the obligations contained in the Draft Covenant. They reflect international consensus...»; *IUCN Draft International Covenant on Environment and Development*, prepared by the Commission on Environmental Law of the IUCN in co-operation with the International Council of Environmental Law, Environmental Policy and Law Paper No 31 (IUCN, 1995), at 31. No explicit reference is made to 'general principles of law recognized by civilized nations' in either draft and respective commentary thereto.

Scholars have remained extremely evasive on this point so far, and have avoided to support or reject such an analogy, or otherwise qualify the 'principles' referred to in international environmental law. Kiss & Shelton for instance refer only briefly to the 'general principles of law recognized by civilized nations' of some relevance in the area of the environment, and abstain qualifying other fundamental principles of environmental law not assimilated to the first category; *International Environmental Law*, 107; see also Jurgielewicz, *Global Environmental Change and International Law: Prospects for Progress in the Legal Order*, (University Press of America, 1996), at 43-44. Birnie & Boyle of the other hand, take the view that only those 'general principles of law recognized by civilized nations' that establish 'basic standards of behaviour for international society' have a significance and relevance *in support* of a decision taken on the basis or in application of international environmental law. They seem to dismiss however the possibility of 'general principles of law' as a constitutive of a rule of law; Birnie & Boyle, at 23; also Birnie, 'International Environmental Law : its Adequacy for Present and Future Needs', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 2, at 61-62. No further clarification is provided in the various studies devoted to one or another specific principle; see for instance Freestone & Hey, *Precautionary Principle in International Law* (Kluwer Law International, 1996); Hohmann, *Precautionary Legal Duties and Principles of Modern International Environmental Law* (Graham & Trotman/Martinus Nijhoff, 1994); Rosenberg, *Le principe de la souveraineté des États sur leurs ressources naturelles* (LGDJ, 1983). Sands is one of the few authors to have clearly and explicitly dissociated general principles as frequently referred to in international environmental law documents and instruments from the general principles of law in the sense of 1945 ICJ Statute Art. 38(1)(c); see *Principles* Vol. 1, at 123, n. 102, and 'International Law in the Field of Sustainable Development', 65 *British YbIL* (1994), 303, at 336 n. 136. So did recently Dominicé in a paper devoted to 'Les Principes: leur portée et leur signification'; *supra* n. 48.

(67) As it could be understood from the substitution of 'international law for sustainable development' for 'international environmental law' throughout 1992 Agenda 21, or from 1992 Rio Declaration on the Environment and Development, Principle 27, which provides for the development of international law in the field of sustainable development. Some authors however, fear that sustainable development reduces international environmental law to 'a mere appendage of international development law' subordinated to economic rationality; Pallemmaerts, 'International Environmental Law from Stockholm to Rio: Back to the Future?', in Sands (ed.) *Greening International Law* (Earthscan, 1993), Chap. 1, at 19; also Pallemmaerts, 'La Conférence de Rio: Grandeur ou décadence du droit international de l'environnement ?', (*continued*)

reformulating or reaffirming existing or emerging environmental principles, than the statement of new ones.

3) The definition of sustainable development is no clearer than its nature⁽⁶⁸⁾. International legal and political instruments often refer to sustainability and sustainable development in an inconsistent way; hence for instance, sustainable use is alternatively equated to rational use⁽⁶⁹⁾ or to conservation⁽⁷⁰⁾ of environmental resources, and despite the alleged inherent environmental dimension of the concept⁽⁷¹⁾, the pleonastic expression of environmentally sound and sustainable development is commonly used⁽⁷²⁾. Very few are the instruments providing for a comprehensive and operational definition⁽⁷³⁾. Scholars on the other hand, tend to mould their own understanding of the terms according to their own economic, political or legal perspective.

28 *RBDI* (1995), 175, at 221; Lipschutz, 'Wasn't the Future Wonderful? Resources, the Environment and the Emerging Myth of Global Sustainable Development', 2 *Colorado JIELP* (1991), 35. It is sometimes suggested, albeit never elaborated upon, that sustainable development constitutes an expression of the merger of environmental and developmental laws; see for instance Luff, 'An Overview of International Law of Sustainable Development and A Confrontation Between WTO Rules and Sustainable Development', 29 *RBDI* (1996), 90, at 143.

(68) As an anonymous commentator wrote, sustainable development is «more easily defined by what it is not, than by what it actually is»; UN Chronicle, June 1992, at 46; see also Hoelting, 'After Rio: The Sustainable Development Concept Following the United Nations Conference on Environment and Development', 24 *Georgia JICL* (1994), 117, 131 *et sequ.*

(69) 1992 Biodiversity Convention, preambular Paras. 5, 13, 20-23, and Arts. 8(g), 10(a), 11, 12, 13(b), and 19 (3); 1992 ECE Watercourses Convention, preambular Para. 4 and 6, and Art. 3(1)(i); 1997 UN Convention on the Non-Navigational Uses of International Watercourses, preambular Para. 5; see also 1982 UNEP decision on The Environment in 1982 - Retrospect and Prospect, I(1)(a).

(70) 1986 WCED-EG Legal Principles for Environmental Protection and Development define conservation as «the management of human use of a natural resource or the environment in such a manner that it may yield the greatest sustainable benefit to present generations whilst maintaining its potential to meet future generations needs»; see use of terms.

(71) *Our Common Future* (Oxford University Press, 1987), 40.

(72) 1991 ECE Convention on Environmental Impact Assessment, preambular Para. 2; 1992 Biodiversity Convention, Art. 8(a); 1992 ECE Watercourses Convention, Art. 2(2)(b); 1992 ECE Industrial Accidents Convention, preambular Para. 2; 1994 Protocol to the 1979 ECE Transboundary Air Pollution Convention, on Further Reduction of Sulphur Emissions, preambular Para. 14. See also 1987 UNEP Guideline on Environmental Impact Assessment, preambular Par. 1; 1989 Resolution 44/229, on International Cooperation in the Field of the Environment, Para. 11; 1990 Bangkok Ministerial Declaration on Sustainable Development, Paras. 7, 10, 24 and 30; 1991 Tlatelolco Platform on Environment and Development, Para. 4; German Council of Environmental Advisers, 'In Pursuit of Sustainable Environmentally Sound Development', 1994 Environmental Report (extracts), in 25 *EPL* (1995), 90.

(73) See however the 1991 Resource Management Act, New Zealand, introduced into Parliament in December 1989, which defines 'sustainable management' as 'the management of the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people to meet their needs (...) without compromising the ability of future generations to meet their own needs, and includes the following considerations: (a) The maintenance and enhancement of the quality of the environment, including the life-supporting capacity of the environment and its intrinsic values; (b) The use, development or protection of natural and physical resources in a way which provides for the social, (continued)

Some influential economists for instance, define sustainable development as

«a situation in which the development vector [that is, the vector of desirable social objectives that include access to resources, as well as increases in real income *per capita*, improvement in health and nutritional status, educational achievement, fairer distribution of income and increases in basic freedom] does not decrease over time.»⁽⁷⁴⁾

Sustainable development is about being fair to the future. It is about leaving the next generation a similar, or better, resources endowment than that which we inherited (...) Being fair means (...) taking only the sustainable yield from renewable resources and honouring the environment's limited capability for receiving waste. It means using exhaustible resources wisely so that, as they are depleted, the profits from their use are reinvested in technology and other forms of capital wealth.»⁽⁷⁵⁾

More generally, Conway understands sustainability as

«the ability of a system to maintain productivity in spite of a major disturbance such as that caused by intensive stresses or a large perturbation (...) Lack of sustainability may be indicated by declining productivity...»⁽⁷⁶⁾

In environmental politics, it is considered that

«[s]ustainable development, if it is not to be devoid of analytical content, means more than seeking a compromise between the natural environment and the pursuit of economic growth. It means a definition of development which recognises that the limits to sustainability have structural as well as natural origins.»⁽⁷⁷⁾

«[I]t simply means a form of economy that does not undermine the capacity of the earth and all its component parts to provide both nurture and the basic resource needs for all living matter, including human beings.»⁽⁷⁸⁾

economic and cultural need and opportunities of the present and future inhabitants of a community; (c) Where the environment is modified by human action, the adverse effects of irreversible change are fully recognised and avoided or mitigated to the extent practicable; (d) The use, development, or protection of renewable natural and physical resources so that their ability to yield long term benefits is not endangered; (e) The use or development of non-renewable natural and physical resources in way that sees an orderly and practical transition to adequate substitutes including renewable resources»; and (f) The exercise of *kaitiakitanga* which includes an ethic of stewardship»; referred after Hunt, Bobeff & Palmer, 'Legal Issues Arising from the Principle of Sustainable Development: Australia, Canada and New Zealand', 9 *Journal of Energy & Natural Resources Law* (1991), 1, at 20.

⁽⁷⁴⁾ Pearce *et al.*, *Sustainable Development: Economics and Environment in the Third World* (E. Elgar, 1990), at 2-3.

⁽⁷⁵⁾ Pearce, 'An Economic Perspective on Sustainable Development', 2 *Development, Journal of SID* (1989), 17, at 17.

⁽⁷⁶⁾ 'Agroecosystem Analysis', ICCET Series E, No 1, (Imperial College London, 1983), at 12.

⁽⁷⁷⁾ Redclift, *Sustainable Development: Exploring the Contradictions* (Routledge, 1987), 199.

⁽⁷⁸⁾ O'Riordan, 'The new Environmentalism and Sustainable Development', 108 *The Science of the Total Environment* (1991), 5, at 7.

In sum, sustainable development

«ensures continuing growth and progress for humankind, whilst arresting and changing those processes which cause irreversible damage to the environment (...) overall, it exposes a concern which focuses on human *need* rather than human *want*.»⁽⁷⁹⁾

Lipschutz, inspired by the common characteristics identified in the various existing definitions in environmental politics, suggests the following definition of sustainable development:

«a broad notion that human consumption of resources and environmental services must be sustainable and should not exceed the capacity of the biosphere/environment -possibly in conjunction with technology and social organisation- to supply those resources or absorb waste products. That is, 'natural' stocks and flows of goods and services must not be degraded or damaged to the point that they collapse or disappear. At the same time the concept of sustainable development implies some degree of improvement in human standards of living -not necessarily unfettered economic growth in the classical sense, but some sort of growth, nonetheless.»⁽⁸⁰⁾

From a general legal perspective, sustainable development is perceived as

«[a] development which is not only ecologically but also economically and socially sustainable. Sustainable development charts a way forward which not only meets the needs and aspirations of a present generation but also does so without compromising the ability of future generations to meet their needs to achieve sustainable development (...) This complex concept is not a static state of affairs. It is an ever continuous and on-going process of change and adaptation.»⁽⁸¹⁾

Frequent reference is made to the WCED's famed definition⁽⁸²⁾:

«Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and
- the idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet present and future needs».

Scholars adopting a legal perspective are strongly influenced by the specific area of international law, namely development, human rights, or environment, in relation to which they consider sustainable development. Human rights lawyers for instance, tend

⁽⁷⁹⁾ Smith, 'Global Environmental Issues', in Smith & Warr (eds.) *Global Environment Issues* (Hodder & Stoughton, 1991), 206.

⁽⁸⁰⁾ 'Wasn't the Future Wonderful?', 2 *Colorado JIELP* (1991), 35, at 38.

⁽⁸¹⁾ Salter, 'The Environment, Sustainable Development and the Responsibilities of the Legal Profession', 16 *International Legal Practitioner* (1991), 75, at 76.

⁽⁸²⁾ *Our Common Future* (Oxford University Press, 1987), at 43.

to focus more particularly on the aspect of equity within and between generations, and on the satisfaction of basic human needs, including the need for a clean and healthy environment⁽⁸³⁾.

From the perspective of developmental law, sustainable development is more particularly appraised as a 'normative framework for a more just and human international economic order' that is reminiscent of the message conveyed by the new international economic order proposal⁽⁸⁴⁾. Some authors do not hesitate to qualify sustainable development as a 'renewed claim for a new international economic order'⁽⁸⁵⁾. One should note in this context that, on the eve of the 1992 Conference on Environment and Development, the ILA reconstituted its Committee on a New International Economic Order, established in 1978, as the Committee on the Legal Aspects of Sustainable Development⁽⁸⁶⁾.

By contrast with human rights and developmental law scholars' focus on human needs and aspirations, environmental lawyers put the accent on the conservation and preservation aspect of WCED's definition, and more generally on environmental limits and restrictions⁽⁸⁷⁾. As summarised by Handl, sustainable development means in this context «living off nature's "income" rather than squandering its "capital"»⁽⁸⁸⁾.

(83) Chowdhury, 'Intergenerational Equity : Substratum of the Right to Sustainable Development', in Chowdhury *et al.* (eds.), *The Right to Development in International Law* (Martinus Nijhoff, 1992), Chap. 3.1; Singh, 'Sustainable Development as a Principle of International Law', in De Waart *et al.* (ed.), *International Law and Development* (Martinus Nijhoff, 1988), Chap. 1.1.

(84) Hossain, 'Sustainable Development: A Normative Framework for Evolving a More just and Humane International Economic Order', in Chowdhury *et al.* (eds.), *ibid. supra* n. 83, Chap. 3.2, at 262.

(85) *Quoc Dinh: Droit International Public*, § 626; see also Anand, 'A New International Economic Order for Sustainable Development ?', in Al-Nauimi & Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, 1995), 1209; Ginther, 'Sustainable Development and Good Governance: Development and Evolution of Constitutional Orders', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 10; Hossain, 'The Rio Conference and Post-Rio-New International Economic Order', in Al-Nauimi & Meese (eds.) *ibid.*, at 1199; Hossain, 'Sustainable Development: A Normative Framework for Evolving a More just and Humane International Economic Order', in Chowdhury *et al.* (eds.), *The Right to Development in International Law* (Martinus Nijhoff, 1992), Chap. 3.2.

(86) *ILA Report of the sixty-fifth Conference, 21-26 April 1992* (Cairo, 1993), 407, at Para. 1.12.

(87) Birnie & Boyle, at 4; Handl, 'Environmental Security and Global Change', in Lang *et al.* (eds.), *Environmental Protection and International Law* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 2, at 79; Sands, 'International Law in the Field of Sustainable Development', 65 *British YbIL* (1994), 303, at 306.

(88) Handl, *ibid. supra* n. 87.

WCED's definition is thus widely supported by legal scholars, and is occasionally echoed in international environmental documents⁽⁸⁹⁾. It is clear however, that, like most of other existing definitions, it expresses more a 'state of mind' or 'general orientation', than it sets forth clearly defined legal rules and operational goals or obligations⁽⁹⁰⁾. Nevertheless, considering that, in this thesis, sustainable development is understood as a *principe inspirateur*, and approached *via* some of its associated *principes directeurs*⁽⁹¹⁾, no attempt will be made to elaborate a more comprehensive or detailed definition of sustainable development. WCED's definition⁽⁹²⁾ offers a satisfactory and well-accepted description of the overall background against which each of the *principes directeurs* have been construed. The main focus lies in the influence of sustainable development on international environmental law, appraised through the evolution of selected *principes directeurs*.

ii. Approach and Methodology

1) The thesis as a whole, as well as each chapter, follows an evolutionary perspective; the *principes directeurs* studied and the various environmental regimes used to illustrate them, are neither considered as static nor presented as latest updated; on the contrary, they are viewed as an evolving process. It is therefore important to bear in mind that a convention, a rule or a principle referred to early in a chapter, might have been substantially altered or indeed replaced by a subsequent convention, rule or principle referred to only later in the same chapter when it fits chronologically. The evolutionary approach, perhaps confusing to the reader, appeared nonetheless as the simplest and clearest way to highlight changes, if any, implied by the construction of most classic international environmental law principles against the background of sustainable development, without unnecessarily overburdening the already considerable footnotes. The fundamental modification of a given rule or regime are indicated as often as possible with a cross-reference.

⁽⁸⁹⁾ See *inter alia* 1992 ECE Watercourses Convention, Art. 2(5)(c); 1992 Biodiversity Convention, Art. 2, definition of sustainable use; 1992 OSPAR Marine Environment Convention, preambular Para. 3, and 1990 Bergen Ministerial Declaration on Sustainable Development, introductory Para.

⁽⁹⁰⁾ In the same sense, see Birnie & Boyle, at 6; Bookfield, 'Environmental Stability with Development: What Proposals For a Research Agenda?', in Stokke (ed.), *Sustainable Development* (Frank Cass, 1991), 42, at 46; Handl, *supra* n. 87, at 81; Malanczuk, 'Sustainable Development: Some Critical Thoughts in the Light of the Rio Conference', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 2, at 31 *et sequ.*; Munn, 'Toward Sustainable Development', 26 *Atmospheric Environment* (1992), 2725.

⁽⁹¹⁾ See *infra* ii. Approach and Methodology.

⁽⁹²⁾ *Supra* n. 82.

One should also specify that, at the time of writing the thesis, the *Case concerning the Gabčíkovo-Nagymaros Project*⁽⁹³⁾ was pending before the ICJ; fate decided that the decision of the Court would be delivered as the conclusions of our research were laid down. Whilst the various Chapters of the thesis integrate the most recent developments in the field of international environmental law, we chose to consider the ICJ's decision in the *Gabčíkovo-Nagymaros* case in the concluding Chapter only, to respect the overall approach of the thesis, and because we are convinced that the interesting aspects of the case lie in the expectations it raised, which are mentioned throughout the thesis, as much as, if not more than, in the final decision of the Court.

2) There are two major techniques for approaching international environmental law; the first consists in focusing upon specific rules and their application to specific sectors, and is that usually followed in international environmental law manuals⁽⁹⁴⁾. A second technique involves the identification and development of general principles common to the diverse sectors of application of the law. In this thesis, preference is given to the second approach, considering (a) the inherent difficulty to construe sustainable development otherwise than in programmatic and inspirational terms, and (b) the non-sector specific nature of its subject matter, hence the difficulty to confine its study to particular sectors of the environment.

Indeed, even though sustainable development is referred to in relation to various sectors of the environment, and most frequently in relation to the *use* (as opposed to the contamination or pollution) of environmental resources, it conveys primarily a holistic approach to environmental issues, whereby environmental issues are considered and addressed in their interrelations, and not in isolation from one another⁽⁹⁵⁾. In this context, it seems more appropriate to consider sustainable development as it relates to the environment in general, rather than to any particular sector(s). Consequently, the

(93) *Case concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, 25 September 1997, General List, No. 92, 37 *ILM* (1998), 162; see *infra* Chap. 7, Evaluation of Sustainable Development as an Emerging Principle of International Environmental Law.

(94) See Kiss, *Droit International de l'Environnement* (Pédone, 1983); Kiss & Shelton, *International Environmental Law* (Transnational Publisher and Graham & Trotman, 1991); Kiss, & Shelton, *Traité de Droit Européen de l'Environnement* (Frison-Roche, 1995); Nanda, *International Environmental Policy* (Transnational Publishers, 1995). See however Birnie & Boyle, *International Law & the Environment* (Clarendon, 1992), combining both approaches, and Sands, *Principles of International Environmental Law*, Vol. I (Manchester University Press, 1995), Chap. 6.

(95) See more particularly *infra* Chap. 2/2/iii. Sovereignty over Environmental Resources and Environmental Policies versus Globalisation of Environmental Standards and Policies; Chap. 3/2/ii/b. 1972 Stockholm Declaration on the Human Environment: Institutionalisation of Prevention, and more generally Chap. 5, Principle of Partnership, and Chap. 6, Principles Pertaining to Public Participation.

thesis is not divided into various environmental sectors, but into various environmental principles.

The great majority of treaties and declarations referring to sustainable development, as well as part of the doctrine mentioned above, make reference to the 'principles' selected in the next Chapters⁽⁹⁶⁾. This, of course, does not demonstrate any particular link between the principles considered and sustainable development, as all of them predated sustainable development, and hence have an autonomous existence. However, it tends to confirm that these principles assume a particular role in the 'promotion' of sustainable development. On the other hand, the selected principles represent by no means an exhaustive or an exclusive list of the principles that can or could be associated with sustainable development; their choice, as much as their classification is partial⁽⁹⁷⁾.

⁽⁹⁶⁾ See references *supra* n. 21 to 59; the principles are also frequently associated with sustainable development in the majority of the drafts or declarations purported to elaborate sustainable development, namely 1986 WCED-EG Legal Principles for Environmental Protection and Development, 1992 Rio Declaration on Environment, 1995 IUCN Draft International Covenant on Environment and Development. See also Department for Policy Coordination and Sustainable Development, Report of the Expert Group Meeting on Identification of Principles of International Law for Sustainable Development, Geneva, Switzerland, 26-28 September 1995; posted at the UN Website @ [gopher://gopher.un.org/00/esc/cn17/1996/backgrnd/law.txt].

⁽⁹⁷⁾ Other researches on sustainable development have been structured around other principles; to mention only a few, Dommen contemplates the polluter-pays principle, the user-pays principle, the precautionary principle, and the subsidiary principle; *Fair Principles for Sustainable Development* (Edward Elgar, for UNCTAD, 1993). Freestone singles out the precautionary principle, the principle of differentiated obligations, the principle of protection of indigenous populations, the principle of effective environmental legislation, and the principle of environmental impact assessment; 'The Road from Rio: International Environmental Law after the Earth Summit' (the University of Hull Press, 1993). Sands identifies two categories of principles: the core principles apparently inherent in the principle of sustainable development, stating the limits to be placed on the use of environmental resources, and other general principles drawn from other areas of environmental law, and intended to assist States in the promotion of sustainable development. The principles from the first category are the integration of environment and development, inter-state equity, intergenerational equity, and non-exhaustion on natural resources. The principle of permanent sovereignty over natural resources and no environmental harm, the good neighbourliness and international co-operation principle, the common but differentiated responsibility principle, the precautionary principle and the polluter-pays principle belong to the second category; Sands, 'International Law in the Field of Sustainable Development', 65 *British YbIL* (1994), 303. For Primrosch, sustainable development is synonymous with a 'repertory of guiding legal principles serving as cardinal requirements, which contains *inter alia* the principle of solidarity, common but differentiated responsibility, intergenerational equity, prevention and precaution, and polluter-pays principle; 'The Spirit of Sustainable Development within Authoritative Decision-Making Processes', 47 *Austrian JPIL* (1994), 81, at 83 *et sequ.*. Singh, inspired by 1986 WCED-EG Legal Principles for Environmental Protection and Development, focuses upon the right to an adequate environment, the principle of optimum sustainable yield, the principle of equitable utilisation of transboundary resources, and the principle of co-operation; 'Sustainable Development as a Principle of International Law', in De Waart *et al.* (ed.), *International Law and Development* (Martinus Nijhoff, 1988), Chap. 1.1. The Report of A Consultation Convened by the Foundation for International Environmental Law and Development, *supra* n. 19, singles out the principle of precaution, intergenerational equity, common but differentiated responsibility, and public participation; see also Dupuy, 'Où en est le droit international de l'environnement à la fin du siècle?', 101 *RGDIP* (1997), 873, at 881; Ferrari Bravo, 'Considérations sur la méthode de recherche des principes généraux du droit international de l'environnement', 7 *Hague YbIL* (continued)

Someone reasonably acquainted with the literature on sustainable development would be justified to expect to read about the polluter pays principle or internalisation of environmental costs at the source, the integrated approach principle⁽⁹⁸⁾, to cite only some of the principles most commonly associated with sustainable development, or could be surprised to note that the common but differentiated responsibility principle, or environmental impact assessment are not erected as autonomous principles.

The selection of the five principles considered in the thesis was inspired by two major factors: (1) their applicability to *all* sectors of international environmental law, and not only to certain sectors only, and (2) their relevance in the light of the original focus of the research. Indeed, the thesis purported initially to concentrate on the link often drawn between women and sustainable development⁽⁹⁹⁾. For this purpose, it was originally divided into two parts: one dedicated to sustainable development in general, and the other devoted to the association of women to sustainable development, as expressed *inter alia* with 'women clauses' in international environmental law documents.

As the research progressed however, it became evident (a) that the latter association was essentially motivated by the *factual* contribution of women to the development process and to the protection of the environment, as well as by their *factual* vulnerability to environmental degradation, and (b) that 'women clauses' relate more to the advancement of women, and less to environmental (or developmental) concerns as such⁽¹⁰⁰⁾. In sum, references to women in international environmental law could be understood as a 'cross-reference' to the issue of the advancement of women, a reminder that environment and development must be tackled with due consideration for and in a way consistent, *inter alia*, with the advancement of women. The clauses illustrate in fact the close interrelatedness of the social/human rights and environmental facets of

(1994), 3; Luff, 'An Overview of International Law of Sustainable Development and A Confrontation Between WTO Rules and Sustainable Development', 29 *RBDI* (1996), 90, at 99.

(98) The principle of integration is probably the 'greatest' absent from this research. The following point must be made with regard to this principle in particular: as it will be demonstrated in the *concluding* Chapter, the element of an integrated approach is indeed a predominant feature of sustainable development. In our view, the principle of an integrated approach principle would probably be the next and most useful topic of research, to envisage the future evolution and operationalisation of sustainable development in law, that is in all the areas of law, including environmental law, economic and trade law, human rights law, etc. This thesis, however, represents the preceding stage, that is the stage purporting to *demonstrate* that sustainable development is predominantly about integration.

(99) See clauses referring to women in international environmental law instruments and documents listed at Chap. 6/4. Women Participation and Women Interests Clauses in Environmental Documents.

(100) See Chap. 6/4/i. Origins of Women Participation and Women Interests Clauses.

sustainable development⁽¹⁰¹⁾. This original 'gender' dimension of the thesis is also behind the decision to take women, and not NGOs, as an example of 'public participation' in international environmental law and policy. In practice, however, we would have been more justified to concentrate on the contribution of NGOs to environmental protection, as they clearly represent a seminal force in the international law making and law enforcing effort in this particular area⁽¹⁰²⁾.

Such conclusion meant that 'women clauses', even in international environmental documents, fall within the province of the advancement of women, and hence well beyond the scope of a thesis dedicated to international environmental law. Besides, it appeared paradoxical to focus on women in a separate part of the thesis, whilst the major issue is about the *integration* of women in sustainable development. Accordingly, women are finally referred to only briefly, as a case study on the interrelation of the social and environmental dimensions of sustainable development, and a case of application of the principles pertaining to public participation⁽¹⁰³⁾. This conclusion and the resulting re-orientation of the thesis are not meant to undermine the importance of women issues as such, or in relation to the environment; they simply obey the imperative to remain within the original legal framework of the thesis.

iii. Legal Framework

This thesis draws both upon 'classic' treaty and customary sources of international law and upon the numerous resolutions, declarations, recommendations, agendas, programmes and platforms of action adopted by the General Assembly, World Conferences and other multilateral fora in the area of the environment⁽¹⁰⁴⁾. Frequent

(101) See *infra* Chap. 6/4/ii. Advancement of Women to Protect the Environment, or Protection of the Environment to Enhance the Advancement of Women?.

(102) See *infra* Chap. 6/4/1 Introduction and Chap. 6/4/3. Towards a More Holistic Approach to International Environmental Law: the Environment-Human Rights Law Dimension.

(103) See Chap. 6/4. *supra* n. 99, and Chap. 6/5.

(104) As indicated by the of the lists of resolutions and recommendations and other documents annexed to the thesis, which length is comparable to the list of the treaties. The existence of sourcebook of soft international environmental law, and the introduction of a soft law section in international environmental law sourcebook is also indicative of the weight attributed to soft documents in this area of international law; see Burhenne, & Jahnke, *International Environmental Soft Law, Collection of Relevant Documents* (looseleaf), (Kluwer Law International, 1993-pres.); Burhenne & Robinson (eds.), *International Protection of the Environment: Conservation in Sustainable Development* (booklets) (Oceana, 1995-pres.); Hohmann, (ed.), *Basic Documents of International Environmental Law* (Graham & Trotman, 1992) Vol. 1; Sands *et al.* (eds.), *Principles of International Environmental Law: Documents in International Environmental Law* (Manchester University Press, 1994), Vol. IIA.

references are also made to framework conventions and preambular clauses of treaties and declarations.

Environmental law, alongside the law regulating economic relations and development⁽¹⁰⁵⁾, constitute an area in which the so-called 'soft regulation'⁽¹⁰⁶⁾ has most predominantly emerged, bringing those sectors of law at the 'thin edge of international law'⁽¹⁰⁷⁾. In the field of economic relations and development, the proliferation of 'soft instruments' testifies primarily to a strategy of developing countries to using their numerical majority at the United Nations General Assembly and at the United Nations Conference on Trade and Development to counter the hegemony of industrialised States, and amend classic international rules considered fundamentally biased in favour the latter⁽¹⁰⁸⁾.

(105) More particularly on the development and use of 'soft law' in economic relations, see Gruchalla-Wesierski, 'A Framework for Understanding "Soft Law"', 30 *McGill LJ* (1984), 37; see also Benedek, 'Progressive Development of the Principles and Norms of International Law Relating to the NIEO, The UNITAR Exercise', 36 *ÖZöRV* (1986), 289; Bollecker-Stern, 'The Legal Character of Emerging Norms Relating to the NIEO: Some Comments', in Hossain (ed.), *Legal Aspects of the New International Economic Order* (Frances Pinter/Nichols Publishing Company, 1980), Chap. 2; Chowdhury, 'Legal Status of the Charter of Economic Rights and Duties of States', in Hossain (ed.), *ibid.*, Chap. 3; Flory, *Droit international du développement* (Presses Universitaires de France, 1977), Chap. II; Mendelson, 'The Legal Character of General Assembly Resolutions: Some Considerations of Principle', in Hossain (ed.), *ibid.*, Chap. 4; Seidl-Hohenveldern, *International Economic Law*, 2nd edn. (Martinus Nijhoff, 1992), Chap. 4, more particularly 37 *et sequ.*; Tomuschat, 'Die Charta der wirtschaftlichen Rechte und Pflichten der Staaten, Zur Gestaltungskraft von Deklarationen der UN-Generalversammlung', 36 *ZaöRV* (1976), 444; Virally, 'La deuxième décennie des Nations Unies pour le développement, essais d'interprétation para-juridique', 16 *AFDI* (1970), 9; Virally, 'La Charte des droits et devoirs économiques des États : Notes de lecture', 20 *AFDI* (1974), 57; see also *infra* Chap. 2/2/ii Sovereignty over Economic Assets and Policy in a New International Economic Order.

(106) That is regulation traditionally considered as formally non-binding due to its authors, hortatory content or/and its location into a legally binding treaty or convention. The use of the terms soft law and the distinction made between soft and hard law remains controversial in the doctrine; the considerations of the pros and cons for such classification of law is not directly relevant for this thesis and is thus not considered here; specifically on this issue see Bothe, 'Legal and Non-Legal Norms: a Meaningful Distinction in International Relations?', 11 *Netherlands YbIL* (1980), 65; Klabbers, 'The Redundancy of Soft Law', 65 *Nordic JIL* (1996), 167, and references contained therein. See also Handl, 'National Use of Transboundary Air Resources : The International Entitlement Issue Reconsidered', 26 *NRJ* (1986), 405, at 407 *et sequ.*; Reisman, 'International Law-Making: A Process in Communication', 75 *ASIL Proc.* (1981), 101, at 102.

(107) Lang, *infra* n. 109.

(108) See *infra* Chap. 2, Principle of Permanent Sovereignty over Natural Resources, and on the changing structure of international law, references Chap. 5, Principle of Partnership, 1. Introduction. Generally on the move away from classic law-making techniques to softer approaches, see Danilenko, *Law-Making in the International Community* (Martinus Nijhoff, 1993). Danilenko is particularly critical of the increasing use of 'soft' law-making techniques and observes the discussions about the legal value of 'soft' rules «raise fundamental questions about the continued ability of international law to serve as an effective normative instrument contributing to the maintenance of the world order. There is a danger that international law will become just a loose collection of vague precepts used as a disguise for conflicting political claims couched in legal or quasi-legal language»; *ibid.*, at xiv.

In the area of the environment by contrast, the important number of rules and declarations expressed in hortatory terms, or issued by institutions or organs formally deprived of the authority to take legally binding decisions or impose rules on the issue is more appropriately described as a 'voluntaristisches Defizit'⁽¹⁰⁹⁾ from the part of both developed and developing States.

The phenomenon indeed reflects States' recognition of the necessity to take some measures on certain environmental issues, combined with a lack of genuine political will to set forth legally binding rules where a certain degree of uncertainty remains as to the actual necessity and potential implications of such rules⁽¹¹⁰⁾. It also reflects the difficulty to agree upon universal rules in the light of the fundamental inequality in the level of economic and scientific development of States, hence in the financial and technical means available⁽¹¹¹⁾. Besides, the rapid development of science and knowledge, as well as the constant emergence of new sources of environmental threats and pollution have highlighted the extreme rigidity and cumbersome nature of orthodox sources of international law, and the necessity to complement them with more flexible sources⁽¹¹²⁾. As Fenwick pointed out:

«The existence of a general forum where problems can be discussed and resolutions adopted makes it possible to meet critical situations before they reach the point of a dangerous crisis.»⁽¹¹³⁾

Among the 'alternative sources' that contribute more particularly to the development of international law in the area of the environment count the resolutions,

(109) Lang, 'die Verrechtlichung des internationalen Umweltschutzes, vom "soft law" zum "hard law"', 22 *AVR* (1984), 283, at 285.

(110) See Dupuy, 'Soft Law and the International Law of the Environment', 12 *Michigan JIL* (1991), 420, at 421 *et sequ.*; Lang, *ibid. supra* n. 109; Sand, 'UNCED and the Development of International Environmental Law', 3 *YbIEL* (1992), 3, at 6 *et sequ.*; Tomuschat, *infra* n. 115, at 568. On States' reticence to take international binding measures despite of persistent scientific uncertainty with regard to the actuality of given environmental threat or harm, see *infra* Chap. 3, Prevention and Precautionary principles.

(111) Beck, *Die Differenzierung von Rechtspflichten in den Beziehungen zwischen Industrie- und Entwicklungsländern. Eine völkerrechtliche Untersuchung für die Bereiche des internationalen Wirtschafts-, Arbeits- und Umweltrechts* (Peter Lang, 1994), Chap. IV; Lang, *ibid. supra* n. 109; see further *infra* Chap. 5/3, The Parameters for Global Co-operation.

(112) Boyle, 'Treaties and Soft-Law', Paper presented at Forum Geneva, *Multilateral Treaty-Making: The Current Status of Challenges to and Reforms Needed in the International Legislative Process*, organised by the American Society of International Law and the Institut Universitaire des Hautes Etudes Internationales, Geneva, May 16, 1998; Dupuy, *ibid. supra* n. 110; Tomuschat, *infra* n. 115, at 565. See also Dan Tarlock, 'Stewardship Sovereignty: The Next Step in Former Prime Minister Palmer's Logic', 42 *Washington University Journal of Urban & Contemporary Law* (1992), 21, at 22-23; Susskind, *Environmental Diplomacy, Negotiating more Effective Global Agreements* (Oxford University Press, 1994), Chap. 2.

(113) Fenwick, 'International Law: the Old and the New', 60 *AJIL* (1966), 475, at 480.

recommendations and declarations issued by political bodies and the various agendas and platforms adopted by international fora, and the drafts and recommendations prepared by legal but private organs. In the 'harder' part of the law, particular consideration is paid to non legally binding provisions such as preambular clauses to treaties, and to framework conventions.

As to the resolutions, decisions and other non-binding form of recommendations from political organs⁽¹¹⁴⁾ and fora vested with no legislative mandate apart from a general recommendatory power⁽¹¹⁵⁾, the view prevails in the doctrine⁽¹¹⁶⁾ and among

(114) As far as the UN General Assembly is concerned, a suggestion was expressly rejected at the Conference of San Francisco, to vest it with a limited legislative mandate and confer a certain legal authority to its recommendations. No mention of the General Assembly recommendations was finally included in the 1945 ICJ Statute, Art. 38(1), that lists the formal sources of international law; see Mendelson, *supra* n. 105, at 96 *et sequ.* The General Assembly is merely vested with recommendatory powers to the UN Members, on various matter with the UN Charter (1945 UN Charter, Arts. 10 to 14), inter alia «for the purpose of promoting international co-operation in the political field and encouraging the progressive development of international law and its codification»; Art. 13(1)(a). The implicit competence of the General Assembly to take binding decisions was recognised in a limited number of instances, such as in the context of the revocation of the League of Nations Mandate and the resolution, with the consent of the administering authority, the control of trusteeship agreement (so-called 'definitive legal effect' of UNGA resolution) see *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa), notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, ICJ Rep. 1971, 16, at 31; Case concerning the Northern Cameroons (Cameroon v. United Kingdom), Preliminary Objections, Judgment of 2 December 1963: ICJ Rep. 1963, 15, at 32; Certain Phosphates Lands in Nauru (Nauru v. Australia), Preliminary Objections, Judgment, ICJ Rep. 1992, 240, at Para. 23.* See extensive bibliography of the abundant literature on the question of the value of General Assembly resolutions in *Oppenheim's International Law*, Vol. 1, § 16, n. 1. Kiss & Shelton identify essentially three organs vested with a limited authority to take binding resolutions on environment related matters: (1) the Security Council, by virtue and in the limited context of 1977 ENMOD Convention, Art. 5; (2) OECD, whose decisions are in principle binding upon States parties unless stated otherwise. OECD however constitutes more of a consultative and research institution than a law-making authority, and issues essentially recommendations suggesting measures and providing guidelines (frequently referred to in this thesis) rather than takes binding decisions committing States to specific action. (3) The EC, vested with full law-making authority, and whose competence on environmental matters is now explicitly recognised; see *infra* Chap. 3, Prevention and Precautionary Principles, n. 43 and 44 (CR); Kiss & Shelton, *International Environmental Law*, 109 *et sequ.*

(115) This includes most importantly international Conferences, which saw a revival of popularity in the recent years, with no less than five Conferences convened between 1992 and 1995 on diverse global issues of an 'economic, social, and humanitarian character' in the sense of 1945 UN Charter Art. 1(3), namely the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc.A/CONF.151/26/Rev. 1 (3 Vol.); the World Conference on Human Rights, Vienna, 14-25 June 1993, UN Doc.A/CONF.157/23; International Conference on Population and Development, Cairo, 5-13 September 1994, UN Doc.A/CONF.171/13; the World Summit for Social Development, Copenhagen, 6-12 March 1995, UN Doc.A/CONF.166/9; and the Fourth World Conference on Women, Beijing, 4.15 September 1995, UN Doc.A/CONF.177/20. For a brief discussion on the outcome of these five Conferences, see Tomuschat, 'The Concluding Documents of World Conferences', in Makarczyk (ed.), *Theory of International Law at the Threshold of the 21st Century* (Kluwer Law International, 1996), 563.

(116) See Brownlie, *Principles*, 14 *et sequ.* and 699 *et sequ.*; Charney, 'Universal International Law', 31 *AJIL* (1993), 529; Dupuy (P.-M.), 'Soft Law and the International Law of the Environment', 12 *Michigan JIL* (1991), 420; Dupuy (R.J.), 'Declaratory Law and Programmatic Law: From Revolutionary Custom to "Soft Law"', in Akkerman et al (eds), *Declarations on Principles: A Quest for (continued)*

industrialised States, that such instruments are not, strictly speaking, legally binding upon States⁽¹¹⁷⁾. Industrialised States have more particularly reaffirmed the purely voluntary nature of international law and dismissed the legal value of General Assembly resolutions in the context of the debate on a new international economic order, for the obvious reason that they were not keen to surrender their law-making authority on issues to which they are firmly opposed, to organs and Conferences taking their decisions according to the majority rule, and where they are in numerical minority⁽¹¹⁸⁾.

More recently, a number of States have reasserted their understanding of the non-binding nature of concluding declarations and programmes of action of international Conferences, and expressly reserved their sovereign right regarding the implementation

Universal Peace (Sijthoff, 1977), 247; Kolasa, 'Some Remarks on the Concept of Resolution and Decision of International Organizations', in Makarczyk (ed.), *Essays in Honour of Judge Manfred Lachs* (Martinus Nijhoff, 1984), 493; Lang, *ibid. supra* n. 109; Lauterpacht (ed.), *Oppenheim's International Law*, 8th edn, Vol. 1 (Longman, Green & Co., 1955), at § 168(i) *et sequ.*; *Oppenheim's International Law*, Vol. 1 (9th edn.), Para. 16; Virally, 'La valeur juridique des recommandations des organisations internationales', 2 *AFDI* (1956), 66, and 'Résolutions et Accord International', in Makarczyk (ed.), *Essays in Honour of Judge Manfred Lachs* (Martinus Nijhoff, 1984), 299; see also the position of the Institut de Droit International, *infra* n 132. See however contra, Castañeda, 'La valeur juridique des résolutions des Nations Unies', 129 *RdC* (1970-D), 211, at 213; Sloan, 'The Binding Force of a Recommendations of the General Assembly of the United Nations', 25 *British YbIL* (1948), 3, at 24, and 'General Assembly Resolutions Revisited', 58 *British YbIL* (1987), 39.

(117) This is notwithstanding the law-making effect of the resolution or recommendation on the internal order of the issuing organisation or institution (self-regulatory effect; actes auto-normateurs); see Kolasa, *supra* n. 116, at 493 *et sequ.*; *Quoc Dinh: Droit International Public*, § 248; Virally, 'La valeur juridique des recommandations des organisations internationales', in Virally, *Le Droit International en Devenir* (PUF, 1990), 169, at 172 *et sequ.*

(118) See most notably the position of industrialised powers with respect to 1974 NIEO Declaration and NIEO Programme of Action, adopted by consensus, with reservations however from the part of the US, FRG, France, UK and Japan; the text of the reservations are reproduced in 13 *ILM* (1974), 744. See also the statement of US Ambassador Scali, extracts in 70 *Department of State Bulletin* (1975), No. 1822, 569. No consensus could be reached on the subsequent 1975 Economic Charter, which was adopted by a vote (120 to 6, Belgium, Denmark, France, UK, US and Luxembourg, and 10 abstentions from other major market economies, Austria, Canada, France, Ireland, Israel, Italy, Japan, the Netherlands, Norway and Spain). The most controversial Article 2(2)(c) had to be adopted separately, with 104 votes in favour and 16 opposed votes (the six States also against to the whole Charter, plus those, but Israel which abstained, opposing it) and 6 abstentions. Already during the drafting stage, some controversy arose as regard to the mandatory character of the Charter, and industrialised States made it clear that such a document could not realistically be considered as anything more than a declaration of intention; see Castañeda, 'La Charte des droits et devoirs économiques des États, Note sur son processus d'élaboration', 20 *AFDI* (1974), 31; Virally, 'La Charte des droits et devoirs économiques des États : Notes de lecture', 20 *AFDI* (1974), 57; and further *infra*. Chap. 2/2/ii. Sovereignty over Economic Assets and Policy in a New International Economic Order. More particularly on US opposition to the Charter, see Statement by Senator Percy, in 72 *Department of State Bulletin* (1975), No. , 1858, 146. Similar reactions were triggered by the developing States' attempt to realise their claim for a new international economic order in the context of the exploitation of the deep-sea mineral resources, *inter alia* with the 1970 Declaration of Principles Governing the Sea-Bed and Ocean Floor, and the Subsoil Thereof, Beyond the Limits of National Jurisdiction. On the status of this declaration, see Li, *The Transfer of Technology for Deep Sea-Bed Mining, the Law of the sea Convention and Beyond* (Martinus Nijhoff, 1994), at 34 *et sequ.*; see further *infra* Chap. 5/2/ iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership.

the recommendations contained therein. The US declared, for instance, to understand and accept that the 1995 Beijing Declaration/Platform for Action for the Advancement of Women «are not legally binding, and that they consist of recommendations concerning how States can and should promote the objectives of the Conference», unless States indicate to the contrary⁽¹¹⁹⁾. Guatemala explicitly reserved its «sovereign right to implementation contained in the Platform for Action...»⁽¹²⁰⁾. Similar statements were made for the 1995 Copenhagen Declaration/Programme for Social Development⁽¹²¹⁾, and although no such declarations were issued with regard to 1992 Rio Declaration on Environment and Development and 1992 Agenda 21 *in toto*, the political nature of the documents was reiterated by a number of States in relation to specific paragraphs or provisions⁽¹²²⁾.

Sometimes, the non-binding nature of an instrument is specified in the very title or text of the instrument, as it is the case for the Non-Legally-Binding Authoritative Statement of Principles for Global Consensus on the Management, Conservation and Sustainable Development of all Type of Forests⁽¹²³⁾, or for the various clauses in 1992 Agenda 21, which provide that States are not obliged any further under the Agenda than they are under relevant legal instruments⁽¹²⁴⁾.

It is worth noticing in this context that the term reservation is also used by States to qualify their decision to waive a resolution or recommendation with respect to themselves⁽¹²⁵⁾. Virally, one of the few authors to comment on this point, considers that the effects of a reservation to a decision taken by consensus is similar to the effects

(119) Report of the Fourth World Conference on Women, UN Doc.A/CONF.177/20, at 173; the US and other States entered similar 'reservations' with regard to specific paragraphs of the Platform; see Reservations and interpretative statements on the Beijing Declaration and Platform for Action, *ibid.*, at 157 *et sequ.*

(120) *Ibid. supra* n. 119, at 160.

(121) Report of the World Summit for Social Development, Copenhagen, UN Doc.A/CONF.166/9, at 111.

(122) Report of the United Nations Conference on Environment and Development, A/CONF.151/26/Rev.1 (Vol. II), at 17 *et sequ.*; the reservations and statements are more particularly considered in the subsequent Chapters when relevant.

(123) On the failure to adopt a Forestry Convention, see *infra* Chap. 2/2/iii. Sovereignty over Environmental Resources and Environmental Policies versus Globalisation of Environmental Standards and Policies.

(124) See for instance Para. 9.2.

(125) Reservations were entered for instance with regard to 1974 NIEO Declaration and NIEO Programme of Action, and to the 1970 Strategy for the Second Development Decade; *supra* n. 118, and Virally, 'La deuxième décennie des Nations Unies pour le développement, essais d'interprétation para-juridique', 16 *AFDI* (1970), 9.

of a reservation to a multilateral treaty⁽¹²⁶⁾; one could also follow the view that such reservations enhance *a contrario* the legal significance of the resolution.

Indeed, to deny any formal legal nature to 'political' recommendations, declarations and agendas is not tantamount to saying that such instruments are deprived of any 'legal significance'⁽¹²⁷⁾. The real issue, as underlined by Virally, «ne se réduit pas à une simple alternative entre l'existence et l'absence d'une force obligatoire; c'est [un problème] plus vaste et plus difficile de la *signification juridique* de l'invitation portée par la recommandation, des effets de droits qu'elle peut produire, à défaut même d'obligation directement et immédiatement créée»⁽¹²⁸⁾. This notion of 'legal significance' as opposed to 'legally binding character' of a rule or principle is far from being clear-cut. The legal significance however, relates more to the *broad influence* of a rule or principle, whilst the binding character relates its *normative content*, in terms of the rights, obligations or limits imposed.

The International Court of Justice has acknowledged, on several occasions, that the 'persuasive force of General Assembly resolutions can be indeed very considerable', although it made it clear that such force operates at the political level, and 'does not make these resolutions binding in law'⁽¹²⁹⁾. Hence, whilst a large majority of resolutions from political bodies remain hortatory and 'declarative' in essence (prescriptive resolutions)⁽¹³⁰⁾, a restricted number of important resolutions or recommendations are accorded some degree of legal significance (law-making resolutions)⁽¹³¹⁾.

(126) 'Résolutions et Accord International', in Makarczyk (ed.), *Essays in Honour of Judge Manfred Lachs* (Martinus Nijhoff, 1984), 299, at 303; Tomuschat seems to adopt a similar stance with regard to disclaimers and reservations on Conference concluding documents; *supra* n. 115, at 568 *et sequ.*

(127) *Oppenheim's International Law*, Vol. I, § 16 n. 1 *in fine*; Tomuschat, *supra* n. 115, at 563.

(128) Virally, *supra* n. 117, at 171.

(129) *South West Africa, Second Phase, Judgment*, ICJ Rep. 1966, 6, at Paras. 50-53; see also *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa), notwithstanding Security Council Resolution 276 (1970), Advisory Opinion*, ICJ Rep. 1971, 16, at 31; *Western Sahara, Advisory Opinion*, ICJ Rep. 1975, 12, Paras. 54-59; *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America), Merits, Judgment*, ICJ Rep. 1986, 14, at 100. The Court reiterated its position in its recent decision over East Timor, but cautiously avoided to reconsider its position on the legal nature of resolutions; see *East Timor (Portugal v. Australia), Judgment*, ICJ Rep. 1995, 90, Para. 29. See however ICJ recognition of a directly binding character in a limited number of cases, *supra* n. 114. The importance of resolutions was also discussed in various international arbitrations; for instance *Texaco Overseas Petroleum Co & California Asiatic Oil Co v. Government of Libyan Arab Republic* (1975 and 1977), 53 *ILR* (1979), 389; see also subsequent decisions in the same sense, *infra* Chap. 2/2/i, Sovereign Control over, and Exploitation of Mineral Resources and other Natural Assets. There is no case-law on the 'legal significance' of Conference resolutions or decisions, but there is no real ground for departing from what is said about General Assembly resolutions; Tomuschat, *infra* n. 115.

(130) Brownlie, *Principles*, 699. In 1968, Skubiszewski pointed out that among the over 2000 resolutions adopted by the General Assembly in its first twenty years of existence, only a few could be (*continued*)

There are no unified standards, no general rules to distinguish between these two main categories⁽¹³²⁾, and resolutions are evaluated on a case by case basis according to the following elements:

1) The wording of the resolution or declaration, and the normative conception underlying it. Like any potential new rule of international law⁽¹³³⁾, the actual effectivity, hence the legal significance of that norm incorporated into a formally binding or non-binding instrument depends on the determinacy of the norm, *viz.* «on the precision of the provision, the kind of action prescribed, and any implied or explicit escape clauses» ('norm-creating character')⁽¹³⁴⁾. Some authors contend in fact that the lack of enforceability of resolutions and other political statements pertains more to the discretion left to the addressee to interpret subjectively the content of the obligation, it being understood that «the less precise the norm, the greater is the discretion of the addressee of the obligation»⁽¹³⁵⁾.

Clearly however, the degree of precision is one but not the sole factor that evidences a certain legal significance of a declaration or resolution. As often, States consent to wider and more detailed plans of actions and programmes in political instruments than

regarded as law-making; Skubiszewski, 'A New Source of the Law of Nations: Resolutions of International Organisations', in *Recueil d'études de droit international en hommage à Paul Guggenheim* (Faculté de Droit de l'Université de Genève & IUHEI, 1968), 508, at 508.

(131) Brownlie, *Principles*, at 14.

(132) This two-fold distinction is a pure creation of the doctrine, reflected to a certain extent in the judicial and arbitral decisions mentioned above, *supra* n. 129; it is therefore neither reflected in, nor regulated by international law as such. In such context, the conclusions of the Commission on the Value of the Resolution of the General Assembly of the United Nations, appointed by the Institut de Droit International in 1977, under the chair of Prof. Skubiszewski, are particularly useful to help identify the nature of such resolutions; 57 *Ann.IDI* (1977), Pt. II, 96, at 102-103. Skubiszewski's Report was first submitted at the Helsinki Session in 1985 (61 *Ann.IDI* (1985), Pt. I, 29) and the final conclusions of the Institute on the report postponed to the Cairo Session, two years later; 62 *Ann.IDI* (1987), Pt. II, 204; the conclusions are reproduced in Institut de Droit International, 'L'élaboration des grandes conventions multilatérales et des instruments non conventionnels à fonction ou à vocation normative', *Annuaire, Résolutions 1957-1991*, (Pédone, 1992), 180; see also Dupuy (P.-M.), Dupuy (R.J.), and Virally, *ibid. supra* n. 116.

(133) The 'norm-creating character' of new rules and principles in international law is more particularly considered *infra* Chap. 3/2/ iii. Status of Precautionary Principle under International Law; Chap. 4/3/ iii. Operational Implications of a Planetary Trust.

(134) Dupuy, 'Soft Law and the International Law of the Environment', 12 *Michigan JIL* (1991), 420, at 254.

(135) As Bodansky rightly points out, the determinacy of a norm influences compliance more than its legal or non-legal character; 'Customary (and Not So Customary) International Environmental Law', 3 *Indiana Journal of Global Legal Studies* (1995), 105, at 118. In the same sense, Gruchalla-Wesierski, 'A Framework for Understanding "Soft Law"', 30 *McGill LJ* (1984), 37, at 71. Some authors presume the non-legally binding character of rules worded in general and vague terms unless evidence of the contrary; Dupuy, *ibid. supra* n. 134; Schachter, 'The Twilight Existence of Nonbinding International Agreements', 71 *AJIL* (1977), 296, at 297-298.

they would in legally binding documents for the very reason that they know themselves not legally bound⁽¹³⁶⁾; the successive Strategies for the United Nations Development Decade, the NIEO Programme of Action and 1992 Agenda 21 are but clear illustrations of this trend. Tomuschat, ironically commenting on the 'dazzling mass of statements that request, claim, admonish, exhort and recommend' contained in the latter document, considers that «[t]he reader feels compelled to conclude that almost uninhibited leeway was given to every delegation to insert into the text any amendment it considered useful notwithstanding the fact that many times the same idea was already expressed somewhere else, maybe even in different places»⁽¹³⁷⁾.

2) The voting record, where the resolution is taken by a vote⁽¹³⁸⁾, and the eventual reservations in case of consensus resolution⁽¹³⁹⁾. The doctrine remains divided as to whether only unanimously supported resolutions can be attributed a certain law-making value⁽¹⁴⁰⁾, or whether resolutions adopted with an important majority, including those States most affected or concerned, should also be considered⁽¹⁴¹⁾.

3) The expectation that compliance with the norm embodied in the resolution or declaration will be effectively enforced by sanctions and other forms of pressures. Resolutions and declarations, on the contrary to treaty or customary rules, are not susceptible of judicial (or arbitral) enforcement. In the area of the environment however, «les occasions dans lesquelles les différends inter-étatiques sont portés devant une juridiction sont si rares que cette infériorité ne porte pas beaucoup à conséquences»⁽¹⁴²⁾.

The 'structural weakness' of international environmental law indeed, pertains more to the unwillingness of its subjects to enforce it and take legal action against failing States,

(136) van Dijk, 'Normative Force and Effectiveness of International Norms', 30 *German YbIL* (1987), 9, at 20 *et sequ.*

(137) Tomuschat, *supra* n. 115, at 567.

(138) A positive vote is usually interpreted as an expression of agreement to the rule(s) embodied in the resolution, and a negative vote an opposition; the implication of an abstention and of a non participation to the vote remains more controversial; Virally, 'Résolutions et Accord International', in Makarczyk (ed.), *Essays in Honour of Judge Manfred Lachs* (Martinus Nijhoff, 1984), 299. The importance of the voting record was particularly emphasised by Dupuy in the Topco case; *supra* n. 129.

(139) A decision taken by consensus is considered as agreed to by all States unless States have explicitly reserved their positions; Virally, *ibid. supra* n. 138.

(140) van Hoof, *Rethinking the Sources of International Law* (Kluwer Law & Taxation, 1983), 186.

(141) Brownlie, *Principles*, 14; Falk, 'On the Quasi-Legislative Competence of the General Assembly', 60 *AJIL* (1966), 782.

(142) Virally, *supra* n. 138, at 306; see further references *infra* Chap. 2, Permanent Sovereignty over Natural Resources, n. 98 *et sequ.* (CR).

than to the often 'soft' nature of that law itself⁽¹⁴³⁾. Apart from the classic *Pacific Fur Seals arbitration*⁽¹⁴⁴⁾, the *Trail Smelter arbitration*⁽¹⁴⁵⁾, *Lac Lanoux arbitration*⁽¹⁴⁶⁾, environmental issues have been rarely brought to the attention of international judicial organs. Environmental considerations were *part of* the arguments in *Certain Phosphates Lands in Nauru*⁽¹⁴⁷⁾ and in the *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*⁽¹⁴⁸⁾. As for fisheries jurisdiction cases, they were concerned with territorial jurisdiction (qualified with 'the needs of conservation') more than environmental issues *per se*⁽¹⁴⁹⁾.

States tend to prefer out-of-court settlements to international adjudication to resolve environmental disputes for various reasons⁽¹⁵⁰⁾, ranging *inter alia* from the 'perceived lack of bite' of the ICJ or other *ad hoc* arbitration bodies, the desire to resolve the dispute promptly, to more strategic calculations⁽¹⁵¹⁾. In some countries, domestic laws

(143) Epiney, 'Das "Verbot erheblicher grenzüberschreitender Umweltbeeinträchtigungen": Relikt oder konkretisierungsfähige Grundnorm?', 33 *AVR* (1995), 309, at 313; Mann, 'Environmental Learning in a Decentralized Political World', 44 *JIA* (1991), 301, at 322.

(144) (1893), 1 Moore *International Arbitrations*, 755.

(145) Final Award (1936), III *RLAA*, 1965.

(146) (1957) XII *RLAA*, 281.

(147) (*Nauru v. Australia*), *Preliminary Objections, Judgment, ICJ Rep. 1992*, 240. The case resolved with an out-of-court settlement, raised interesting questions relating to fiduciary obligations embodied in the mandate and trusteeship systems. More particularly on the environmental aspect of the dispute, see Anghe, 'The Heart of my Home': Colonialism, Environmental Damage, and the Nauru Case', 34 *Harvard ILJ* (1993), 445.

(148) *ICJ Rep. 1995*, 288.

(149) See *inter alia Fisheries Jurisdiction (United Kingdom v. Iceland, Federal Republic of Germany v. Iceland), Merits, ICJ Rep. 1974*, 3, at 31. The 'needs of conservation' is also at the centre of Canada's defence strategy in the new *fisheries jurisdiction case* (*Spain v. Canada*) over the seizure of the Spanish trailer Estai off Canada's jurisdictional waters. The case however, provided the ICJ dismisses the preliminary objections presented by Canada, is more likely to be tackled under its jurisdictional aspect than its environmental dimension.

(150) See more extensively on that issue Boisson de Chazournes, 'La mise en oeuvre du droit international dans le domaine de la protection de l'environnement: enjeux et défis', 99 *RGDIP* (1995), 37, at 46 *et sequ.*; Dunoff, 'Institutional Misfits: The GATT, the ICJ & Trade-Environment Disputes', 15 *Michigan JIL* (1994), 1043, at 1088 *et sequ.*

(151) It is not rare that an injured State renounces to take action against the source State «because, on other occasions, that nation may be a source of pollution...»; Dunoff, *supra* n.150, 1093. It is for instance suspected that Germany chose not to take any action against Switzerland after the Sandoz blaze, for its responsibility for similar toxic spills in Switzerland earlier; Schwabach, Note: 'The Sandoz Spill: The failure of International Law to Protect the Rhine from Pollution', 16 *Ecology LQ* (1989), 443, at 470. The issue of indemnity in the case of Sandoz has been resolved exclusively *via* out-of-court settlements between Sandoz Chemical Corporation and the affected States, and in few cases, between Sandoz and the affected individuals; Lefeber, *Transboundary Environmental Interference and the Origin* (continued)

were enacted that explicitly exclude the ICJ jurisdiction for any disputes that would arise from activities or areas regulated⁽¹⁵²⁾. As to arbitral procedures provided in some environmental treaties, they are often optional rather than compulsory⁽¹⁵³⁾. Compulsory adjudication of environmental agreements is therefore the exception rather than the rule⁽¹⁵⁴⁾. In this context, the *Gabcikovo-Nagymaros* case recently decided by the International Court of Justice assumed a particular importance for the development and affirmation of a number of contested principles of environmental law considered in this thesis, *inter alia* the 'no substantial harm principle'⁽¹⁵⁵⁾, the precautionary principle⁽¹⁵⁶⁾, the principle mandatory prior consent⁽¹⁵⁷⁾ and the principle of responsibility and accountability to future generations⁽¹⁵⁸⁾. More generally, the parties submitted that the principle of sustainable development' was applicable to the dispute⁽¹⁵⁹⁾.

of State Liability (Kluwer law International, 1996), 251-252. Likewise, the UK decision not to act against the Soviet Union and its successors could lie in its own massive contribution for acid rain in Scandinavia, and contamination of the Irish Sea; Sands, 'The Environment, Community and International Law', 30 *Harvard ILJ* (1989), 393, at 406. No State has taken the initiative to act against the Soviet Union on the behalf of its citizens, although a number of countries, including the UK, Germany, Sweden and Switzerland are reported to have paid indemnities to their own affected nationals; Sands, 'Transboundary Nuclear Pollution : International Legal Issues', in Sands (ed.), *Chernobyl : Law and Communication* (Grotius, 1988), Introduction, at 26 *et sequ.*; also Dutoit, 'L'accident de Tchernobyl et ses conséquences en droit soviétique et en droit international public', in Dutoit *et al.*, *Pollution transfrontière/Grenzüberschreitende Verschmutzung : Tschernobyl/Schweizerhalle* (Helbing & Lichtenhahn, 1989), Chap. I; Lefeber, *ibid.*, 246 *et sequ.*

(152) See most notably Canada's reservation of jurisdiction with regards to her Arctic Waters Pollution Prevention Act, declaration of 7 April 1970, 592, and more recently, Canada's reservation excluding ICJ's jurisdiction for disputes arising out of the application of 1994 Canada Coastal Protection Act, *infra* Chap. 2, Permanent Sovereignty over Natural Resources, at 78, n. 100 (CR). See also Poland's declaration of acceptance of the ICJ's compulsory jurisdiction, reserving explicitly cases involving disputes with regard to pollution unless the jurisdiction of the Court results from treaty obligations of the Republic of Poland; reported by Szafarz, 'Poland Accepts the Optional Clause of the ICJ Statute', 85 *AJIL* (1991), 374.

(153) Sand, 'Transnational Environmental Disputes', in Bardonnet (ed.), *The Peaceful Settlement of International Disputes in Europe: Future Prospects*, Hague Academy of International Law Workshop 1990 (Martinus Nijhoff, 1991), Chap. 7, at 123-124.

(154) Kiss, 'Le règlement des différends dans les conventions multilatérales relatives à la protection de l'environnement', in Dupuy (ed.), *The Settlement of Disputes on the New Natural Resources*, Hague Academy of International Law Workshop 1982 (Martinus Nijhoff, 1983), 119.

(155) *Infra* Chap. 2, Permanent Sovereignty over Natural Resources, n. 193, 202 and 210 (CR).

(156) *Infra* Chap. 3, Precautionary Principle, n. 84 (CR).

(157) *Ibid. supra* n. 156, at n. 172 (CR).

(158) *Infra*, Chap. 5, Intergenerational Equity, n. 85 and 104 (CR).

(159) Reported by Judge Weeramantry, (sep. op.), *Case concerning the Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, 25 September 1997, General List, No. 92, 37 *ILM* (1998), 204, at 205 n. 1. The final judgement of the ICJ is more particularly considered in the concluding part of the thesis, (*continued*)

In sum, the expectations of compliance pertain less to the intrinsic judicial enforceability of the norm considered, and more to its degree of precision and the 'willingness of the addressees to accept it as a guideline for their behaviour'⁽¹⁶⁰⁾. Other criteria, such as the competence and regional 'representativity' of forum, institution or body issuing the rule⁽¹⁶¹⁾, or the substantive consistence of the norm with other norms of the system need also be taken into consideration⁽¹⁶²⁾.

The legal signification of various political decisions or recommendations can be essentially threefold. Some resolutions constitute a source of interpretation of international treaty and customary law on the same issue (interpretative resolution). It is usually recognised for instance that General Assembly resolutions in one of the areas of the UN Charter represents an authoritative source of interpretation of the relevant Charter provisions⁽¹⁶³⁾. Other resolutions reflect and clarify existing customary international law, and help the crystallisation of customary norms (law-declaring resolution)⁽¹⁶⁴⁾. The most controversial resolutions however, and also the most common in the area of the environment (and economic relations) are those stating emerging principles upon activities not yet regulated in international law, and with regard to which state practice is scarce (prospective resolution)⁽¹⁶⁵⁾.

It is widely admitted that prospective resolutions constitute at most a basis and catalyst for, indeed an 'important stage' in the progressive development of international

infra Chap. 7, Evaluation of Sustainable Development as an Emerging Principle of International Environmental Law. On the way the case is reported in the thesis, see *infra* n. 93.

(160) van Dijk, *supra* n. 136, at 16.

(161) Charney, *supra* n. 116, at 546-547; *Quoc Dinh: Droit International Public*, §§ 249 *et sequ.*; Virally, *ibid.* *supra* n. 138.

(162) van Dijk, *ibid.* *supra* n. 136.

(163) This is for instance the case of the 1948 Universal Declaration of Human Rights; 1960 Decolonisation Charter; 1970 Declaration on Friendly Relations.

(164) See for instance the 1962 landmark Resolution on Sovereignty over Natural Resources; see further *infra* Chap. 2/3. The Principle of Permanent Sovereignty over Natural Resources: a Principle of Customary Law.

(165) Terminology of the various resolutions after Dupuy, 'Declaratory Law and Programmatic Law: From Revolutionary Custom to "Soft Law"', in Akkerman et al (eds), *Declarations on Principles: A Quest for Universal Peace* (Sijthoff, 1977), 247. For the latter category, the expression of 'droit transitionnel' was also suggested; Chaumont, 'Valeur juridique des résolutions des Nations Unies', 129 *RdC* (1970-I), 366, at 367. The 1970 Declaration of Principles Governing the Sea-Bed and Ocean Floor, and the Subsoil Thereof, Beyond the Limits of National Jurisdiction, the 1974 NIEO Declaration and NIEO Programme of Action, and 1975 Economic Charter clearly belong to the category of prospective resolutions. So does as we shall see, part of the 1992 Rio Declaration on Environment and Development, which for the other part, restates existing customary law.

law⁽¹⁶⁶⁾ and the 'speedy consolidation of customary rules'⁽¹⁶⁷⁾, but enter into customary law 'by the usual process'⁽¹⁶⁸⁾. Hence, some resolutions or recommendations can be interpreted 'with all due caution' as the expression of States' *opinio juris* on the rule(s) its embodies⁽¹⁶⁹⁾; likewise, States' support -explicit or implicit- for a resolution or recommendation can provide some evidence of state practice⁽¹⁷⁰⁾. Conclusive evidence of a consistent state practice⁽¹⁷¹⁾, most particularly from those States mostly affected or concerned by the matter⁽¹⁷²⁾, or an explicit endorsement of the rule in treaty law⁽¹⁷³⁾

(166) *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa), notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, ICJ Rep. 1971, 16, at 31; Danilenko, 'The Theory of International Customary Law', 31 German YbIL(1988), 9; Primrosch, 'Das Vorsorgeprinzip im internationalen Umweltrecht', 51 ZöR (1996), 227, at 228.*

(167) Brownlie, *Principles*, 14. The 'formative influence' of soft law in international environmental law was more particularly emphasised by the Institut de Droit International's Sub-Commission on Procedure for Adoption of Rules in the Field of the Environment at its 1997 rapport of the same name; see draft reports and comments of individual members of the Sub-Commission in 67 *Ann.IDI* (1997-I), 357 *et sequ.* and final report at 437 *et sequ.* The formative importance of soft law in the development of international environmental law was even enshrined in a draft resolution; *ibid.*, at 474, Para. 8.

(168) Birnie, 'International Environmental Law : its Adequacy for Present and Future Needs', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 2, at 99. See contra n. 116. Sloan considers that «in those areas and on those matters where sovereignty is not vested in a Member State, the General Assembly acting as an agent of the international community may assert the right to enter the legal vacuum and take binding decisions»; 25 *British YbIL* (1948), 3, at 24.

(169) *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America), Merits, Judgment, ICJ Rep. 1986, 14, Paras 188 and 203; see also Danilenko, supra n. 166, at 36.*

(170) *Military and Paramilitary Activities in and against Nicaragua, supra n. 169; see also Brownlie, Principles, 14; Charney, 'Universal International Law', 31 AJIL (1993), 529, at 546-547; Virally, 'Résolutions et Accord International', in Makarczyk (ed.), *Essays in Honour of Judge Manfred Lachs* (Martinus Nijhoff, 1984), 299, at 300.*

(171) As for the 1972 Stockholm Declaration on the Human Environment, or at least Princ. 21; see Birnie, *ibid. supra n. 168; Brownlie, Principles, 15; Charney, ibid. supra n. 170; Handl, 'Territorial Sovereignty and the Problem of Transfrontier Pollution', 69 AJIL (1975), 58; Pineschi, 'The Antarctic Treaty System and General Rules of International Environmental Law', in Francioni & Scovazzi (eds.), *International Law for Antarctica* (Giuffrè, 1987), 187; see *infra* Chap. 2/3, The Principle of Permanent Sovereignty over Natural Resources: a Principle of Customary Law.*

(172) Institut de Droit International, 'L'élaboration des grandes conventions multilatérales et des instruments non conventionnels à fonction ou à vocation normative', *Annuaire des Résolutions 1957-1991*, (Pédone, 1992), 185, Conclusion 8.

(173) As for instance, in the case of the unanimously adopted 1962 Declaration of the Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, translated into binding law with the 1967 Outer Space Treaty. It is also contended that the resolution served in fact as 'midwife for the delivery of nascent rules of instant international customary law', and that it was therefore binding even before being codified; see Brownlie, *Principles, 15; Cheng, 'United Nations Resolution on Outer Space: 'Instant' International Customary Law?', 5 Indian JIL (1965), 23, at 39. The codification on the protection of the atmosphere was also preceded by numerous resolutions and recommendations on the issues; see infra Chap. 3/2/ii/c. Precaution and Sustainable Development; Chap. 5/2/iv. Common Concern, Common Interest of Mankind: Global Partnership or Global Bargain?. Another example is the influence of the decisions and recommendations issued at a series of political Conferences on the*
(continued)

remain necessary before the rule embodied in a resolution or declaration acquires a legally binding character.

In the area of the environment law at least, decisions, recommendations, agendas and other instruments issued by multilateral fora, or international institutions or organisations, contribute immensely to the development of international law on the issue, and indeed accelerate the traditional custom and treaty-based law-making process⁽¹⁷⁴⁾. Their impact is more immediate -albeit arguably more limited- in the sense that they do not need to go through domestic procedures of treaty approval, nor through the process of treaty ratification to enter into force⁽¹⁷⁵⁾.

Consequently, although most recent declarations, resolutions and agendas referred to in the thesis might not have yet crystallised into binding international environmental law, they embody the 'common expression of the will and collective judgement of States'⁽¹⁷⁶⁾, and deserve full consideration as indicators of the *future* trends of that law⁽¹⁷⁷⁾.

Drafts, guidelines and decisions of various legal or technical bodies or institutions specialised⁽¹⁷⁸⁾ or not⁽¹⁷⁹⁾ in international environmental law contribute equally to the development and codification of that branch of law, and are therefore frequently

Protection of the North Sea held at the Ministerial level, over the legal process of re-negotiation of the North East Atlantic regime; see *infra* Chap. 3/2/ii/c. Precaution and Sustainable Development.

(174) Sand, 'UNCED and the Development of International Environmental Law', 3 *YbIEL* (1992), 3; see also Birnie & Boyle, at 19 *et sequ.*; Epiney, *supra* n. 143, at 311; Kiss & Shelton, *International Environmental Law*, 110 *et sequ.* and 1994 *Suppl.* at 55 *et sequ.*; Lang, 'Luft und Ozon - Schutzobjekte des Völkerrechts', 46 *ZaöRV* (1986), 261, at 2263 *et sequ.*; Palmer, 'An International Regime for Environmental Protection', 42 *Washington University Journal of Urban & Contemporary Law* (1992), 5, at 14. Charney even suggests that on certain matters with pronounced law-making potential, such as the environmental issues considered at the 1992 Conference on Environment and Development, repeated endorsements in multilateral fora tend to replace the custom law-making process; *supra* n. 170, at 549. See however more sceptical, Bodansky, *supra* n. 135, at 106.

¹⁷⁵ This point was more particularly developed by Boyle, in a paper on 'Treaties and Soft-Law', presented at Forum Geneva, *Multilateral Treaty-Making: The Current Status of Challenges to and Reforms Needed in the International Legislative Process*, organised by the American Society of International Law and the Institut Universitaire des Hautes Etudes Internationales, Geneva, May 16, 1998.

(176) See *South West Africa Cases (Ethiopia v. South Africa, Liberia v. South Africa)*, Voting Procedure, *ICJ Rep.* 1955, Judge Lauterpacht (sep.op.) 115; *Fisheries case, Judgment of December 18th, 1951: ICJ Rep.* 1951, 116, Judge Alvarez (sep.op.), at 148.

(177) Röling, *International Law in an Expanded World* (Djambatan, 1960), at 85; Susskind, *Environmental Diplomacy, Negotiating more Effective Global Agreements* (Oxford University Press, 1994), Chap. 2. Also Bekhechi, 'Le droit international à l'épreuve du développement durable', 6 *Hague YbIL* (1993), 59.

(178) Most notably IUCN, UNEP, WCED and WECD-EG.

(179) See ILA, IDI, and ILC.

acknowledged throughout the research⁽¹⁸⁰⁾. Although formally deprived of law-making authority, and, in some cases, the result of a purely 'private' initiative⁽¹⁸¹⁾, such drafts represent nevertheless a valuable source of information about existing international environmental law, and provide 'a realistic basis for legal obligations'⁽¹⁸²⁾, hence paving the way to future codification⁽¹⁸³⁾.

(180) The most common drafts are listed in the table of non-binding environmental instruments appended to the thesis and are referred to in the text in an abbreviated manner, without their location being necessarily repeated.

(181) Apart from UNEP, set up as a subsidiary organ of the United Nations in the aftermath of the 1972 Stockholm Conference on the Human Environment to catalyse environmental action and raise awareness world-wide, and co-ordinator of environmental activities within the UN system, among States and governments, regional groupings and NGOs, and ILC, created in 1947 as a subsidiary organ of the UN General Assembly, to work for the progressive codification of international law, the organisations contributing to the development and codification of international law are the result of private initiatives. It is noteworthy that UNEP was originally attributed a catalytic and policy-oriented role and was not intended to deal much with law-making. In practice however, UNEP has largely contributed to the development of environmental law, most notably in the area of the regional seas and of the protection of wildlife and biodiversity; UNEP, *Twenty Years Since Stockholm, Annual Report 1992*, (UNEP, 1993), Chap. 1, 3 and 4; see also Birnie & Boyle, at 47 *et sequ.*; Palmer, 'New Ways to Make International Environmental Law', 86 *AJIL* (1992), 259, at 260 *et sequ.*; Peterson, 'The Role of the United Nations Environment Programme (UNEP) in the Development of International Environmental Law', 5 *American University JIL & Policy* (1990), 351.

(182) On the contribution of ILC, IDI and ILA in the codification of international law in general, see Brownlie, *Principles*, 30; *Oppenheim's International Law*, Vol. I, §§ 16 in fine, 30 and 31 (on ILC), and § 24 (on IDI and ILA). More particularly on their contribution in the codification of international environmental law, see Birnie & Boyle, at 27-28; Dupuy, 'Soft Law and the International Law of the Environment', 12 *Michigan JIL* (1991), 420, at 423 *et sequ.*; Lang, 'die Verrechtlichung des internationalen Umweltschutzes, vom "soft law" zum "hard law"', 22 *AVR* (1984), 283, at 290 *et sequ.*; Sands, *Principles*, Vol. I, Chap. 3 (64 *et sequ.*).

(183) Boyle, *supra* n. 175. To mention only the most frequently cited in the thesis, see for instance 1956 ILA Principles of the Law Governing the Uses of the Waters of International Rivers, 1966 ILA Helsinki Rules on the Use of Waters of International Rivers, and successive ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, widely reflected both in the 1992 ECE Watercourses Convention and 1997 UN Convention on the Non-Navigational Uses of International Watercourses. See also 1978 UNEP Draft Principles on Shared Natural Resources, 1982 ILA Rules on Water Pollution in an International Drainage Basin, and 1986 ILA Rules on the Law of International Groundwater Resources.

The ILA 1982 Montreal Rules of International Law Applicable to Transfrontier Pollution and ILA 1984 Draft Rules on Legal Aspects of Long-Distance Air Pollution have also widely influenced the codification and adaptation of international regulation on long-range transboundary air pollution. Likewise, 1985 UNEP Montreal Guidelines on the Protection of the Marine Environment Against Pollution from Land-Based Source played a certain role in the elaboration inter alia of 1992 OSPAR Marine Environment Convention, and the UNEP 1987 Cairo Guidelines on Hazardous Wastes inspired the drafters of the 1989 Basel Convention on Transboundary Movement of Hazardous Wastes and to some extent of 1991 Bamako Convention on Transboundary Movement of Hazardous Wastes. The 1987 UNEP Guideline on Environmental Impact Assessment was an important platform for the negotiation of the 1991 ECE Convention on Environmental Impact Assessment, not to mention the important influence of the 1986 WCED-EG Legal Principles for Environmental Protection and Development in the drafting of what was intended to be an Earth Charter, and finally lead to the 1992 Rio Declaration on Environment and Development. See also the considerable work of IUCN in the process leading to the 1992 Conference on Environment and Development, and more recently its milestone 1995 Draft International Covenant on Environment and Development, that might contribute to future development of general principles of
(continued)

Another remarkable feature of the sources in the area of environmental law relates to what could be called the 'soft use of hard law'⁽¹⁸⁴⁾. A number of principles and rules relied upon in the thesis, including the principle of sustainable development⁽¹⁸⁵⁾, are contained in the soft or non-binding part of treaty law, *viz.* in preambular clauses. Like declarations and recommendations, preambular clauses are not, *per se*, a source of formally legally binding obligations. The Preamble to a treaty contains, apart from the list of the Contracting Parties, an 'exposé des motifs' setting the general framework, spirit and goal of the treaty⁽¹⁸⁶⁾, and frequently embodies the ideas, concepts and principles which proved too controversial to be directly incorporated in the body text. It constitutes an element of interpretation of the document it prefaces⁽¹⁸⁷⁾, and also gives some indications about the future orientations of international environmental law. In an early case, the ICJ stated clearly, referring more specifically to the United Nations Charter, that

«preambular parts constitute the moral and political basis for the specific legal provisions thereafter set out. Such considerations do not, however, in themselves amount to rules of law»⁽¹⁸⁸⁾.

The so-called 'framework-protocol approach' constitutes another technique employed to set forth the general basis and framework for future actions on a particularly disputed issue without committing States to binding rules or specific measures and policies⁽¹⁸⁹⁾. Under this approach, a general institutional and legal framework of action on a given issue is first negotiated between States, with more specific and detailed provisions and commitments reserved for in annexes or subsequent

international environmental law; more particularly on IUCN's contribution to the development of international environmental law, see *infra* Chap. 6/1, Introduction. One could also mention the numerous OECD and ECE guidelines and drafts; see list of Declarations, Resolutions and Other Relevant Documents.

(184) Kiss, 'Concluding Observations on Transboundary Air Pollution and the Emerging Concepts of International Law', in Flinterman *et al.* (eds.), *Transboundary Air Pollution: International Legal Aspects of the Co-operation of States* (Martinus Nijhoff, 1986), Chap. 18, at 359.

(185) See references *supra* n. 21 to 59.

(186) *Quoc Dinh: Droit International Public*, § 75.

(187) 1969 Convention on the Law of Treaties, Art. 31(2); see also *Case concerning the Rights of nationals of the United States of America in Morocco, Judgment of August 27th, 1952: ICJ Rep. 1952*, 176, at 196-197; *South West Africa Cases (Ethiopia v. South Africa, Liberia v. South Africa), Preliminary Objections, Judgment of 21 December 1962: ICJ Rep. 1962*, 319, at 330-331.

(188) *South West Africa, Second Phase, Judgment, ICJ Rep. 1966*, 6, at § 50.

(189) Terminology after Bodansky, 'The United Nations Framework Convention on Climate Change : A Commentary', 18 *Yale JIL* (1993), 451, at 493 *et sequ.* Also Beyerlin, 'Rio-Konferenz 1992: Begin einer globalen Umweltrechtsordnung?', 54 *ZdöRV* (1994), 124, at 141 *et sequ.*; Kiss, 'Les traités-cadres: une technique juridique caractéristique du droit international de l'environnement', 39 *AFDI* (1993), 792.

protocols elaborated within the legal framework previously agreed, if necessary with the co-operation of scientists and other competent persons or organisations, it being understood that a consensus is more easily reached on principles and institutional framework, than on detailed commitments⁽¹⁹⁰⁾. Such a 'step-by-step approach to regime building'⁽¹⁹¹⁾ has proved particularly useful in the area of the environment, in the light of (a) the pervasive scientific uncertainty about certain environmental phenomena and processes, hence the difficulty to justify certain environmental measures proposed, and (b) the reticence of States to commit themselves to specific measures the very necessity and potential extent of which remain uncertain⁽¹⁹²⁾. The framework-protocol technique was used *inter alia* with respect to acid rain⁽¹⁹³⁾, the ozone layer⁽¹⁹⁴⁾, and climate change⁽¹⁹⁵⁾, and had previously been tested in UNEP regional seas program⁽¹⁹⁶⁾. Only the 1992 Climate Change Convention is explicitly qualified as framework in its title⁽¹⁹⁷⁾.

(190) Caron, 'La protection de la couche d'ozone stratosphérique et la structure de l'activité normative internationale en matière d'environnement', 36 *AFDI* (1990), 704, at 707; Kiss, 'Les traités-cadres: une technique juridique caractéristique du droit international de l'environnement', 39 *AFDI* (1993), 792.

(191) Lang, 'Diplomacy and International Environmental Law Making: Some Observations', 3 *YbIEL* (1992), 108, at 119 *et sequ.*

(192) The attitude of the US at the Climate Conference held in Kyoto, 1-13 December 1997, convened to negotiate an international protocol to the 1992 Climate Change (Framework) Convention on the reduction of greenhouse gases (1997 Kyoto Protocol to the Climate Change Convention) epitomises particularly well States' reticence in this respect; see 'For a Global Energy Policy to Limit Greenhouse Gases', *International Herald Tribune*, 17 November 1997, 10; 'Les Etats Unis et l'Europe s'affrontent à la Conférence Climatique de Kyoto', *Le Monde*, 30 November-1 December 1997, 2; 'Forecast for Climate Talks: Storms, National Interests Clash on Averting Global Warming', *International Herald Tribune*, 1 December 1997, 1 and 4; 'At Kyoto Talks, America Gropes for a Policy on Global Warming', *International Herald Tribune*, 3 December 1997, 1 and 10; 'Kyoto Klimakonferenz; Kühler Empfang für Amerika', *Frankfurter Allgemeine*, 3 December 1997, 1; 'Climate Talks Hit Stumbling Block', *Financial Times*, 3 December 1997, 6; 'Hard task to Win US Friends for the Earth', *Financial Times*, 4 December 1997, 4. See also 'la Terre se réchauffe; 3. Les Etats divergent sur les solutions', *Enquête, Le Monde*, 28 November 1997, 17. See equally negotiation on the ozone layer protection, *infra* Chap. 3/2/ii.c. Precaution and Sustainable Development, and generally Chap. 2, Prevention and Precautionary Principles.

(193) 1979 ECE Transboundary Air Pollution Convention; Protocol to the 1979 ECE Convention on the Long-Range Transboundary Air Pollution, on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at Least 30 Per Cent; 1985 Protocol to the 1979 ECE Convention on the Long-Range Transboundary Air Pollution, Concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes; 1991 Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of the Emissions of Volatile Organic Compounds of their Transboundary Fluxes

(194) 1985 Vienna Convention on the Ozone Layer; 1987 Montreal Protocol on the Ozone Layer; Montreal Protocol on the Ozone Layer as amended/adjusted in 1990; Montreal Protocol on the Ozone Layer as adjusted/amended in 1992; see Caron, *supra* n. 190.

(195) 1992 Climate Change Convention; and protocol on the reduction of greenhouse gases, *supra* n. 192. Among the other framework conventions counts the 1991 Alps Convention, 1992 ECE Watercourses Convention, 1992 ECE Industrial Accidents Convention, 1992 Baltic Sea Convention, 1992 Biodiversity Convention, 1992 OSPAR Marine Environment Convention, each supplemented with
(continued)

iv. Terminological Clarifications

• States are often 'categorised' into groups for practical considerations, to offer an 'international perspective' without neglecting however the divergent positions of States. Reference is made to the position of individual States in specific contexts insofar as it has a particular importance for the purpose of the thesis. States are most frequently categorised according to the classic North-South divide, which usually reflects well the existing fronts on environmental issues, at least under the perspective of sustainable development. As a result of purely personal choice, marginal consideration is paid to former Eastern European States. In this respect, the North is used interchangeably with developed, industrialised, and northern countries, to qualify those countries having achieved an advanced stage of development through industrialisation, which corresponds by-and-large to OECD States. The expressions South, developing countries, or the Third World, are used to refer to Latin America, Africa, and parts of Asia. Those countries comprise the G77⁽¹⁹⁸⁾. The author is yet well aware that such categorisation is over-reductive, arbitrary and fails to reflect the different stage of developments achieved by individual countries.

• A chronological list of binding, as well as non-binding, documents most frequently mentioned in the thesis is provided in separate tables at the beginning of the thesis, with at least one source of reference. To alleviate the footnotes, the listed documents will be summarily referred to with the year of adoption and full or abbreviated titles as indicated in the tables. All resolutions referred to are General Assembly resolutions, unless stated otherwise. Case-law is fully quoted to facilitate precise reference to pages or paragraphs.

protocols or annexes. The 1997 UN Convention on the Non-Navigational Uses of International Watercourses is also qualified as a framework convention in its preambular. Some authors have expressed reservations however as to the genuine framework nature of the convention, and consider on the contrary that a great majority of the convention provisions are specific enough to be a source of direct rights and obligations; see particularly Tanzi, 'La Convenzione di New-York sui corsi d'acqua internazionali', 80 *Rivista di Diritto Internazionale* (1997), 956, at 974. To that author, the qualification as framework convention in the preambular suggests that the convention could serve as a model to other more specific convention.

(196) See references in Bodansky, *ibid. supra* n. 189; Kiss & Shelton, *International Environmental Law*, at 102-103, and *1994 Suppl.*, 53 *et sequ.*; Kiss, *supra* n. 190. More generally, environmental treaties often embody programmatic commitments rather than strict mandatory provisions susceptible of direct enforcement; Kiss, *supra* n. 184, at 359.

(197) Lang attributes such explicit reference to the political necessity to signal clearly that concrete measures are reserved for subsequent protocols; *supra* n. 182.

(198) See explanation of the term and origins of the G77 *infra* Chap. 2, Permanent Sovereignty over Natural Resources, n. 29 (CR).

- Cross-references to other Parts of the thesis are structured as follow: the Chapter is first mentioned, followed where appropriate with the number of the section and subsection; the title mentioned refers to the specific section or subsection considered, unless of course the whole Chapter is concerned. Hence for instance, reference to a specific section reads as follow: Chap. 3/2/ii.c. Precaution and Sustainable Development; Reference to the whole Chapter would be: Chap.2, Prevention and Precautionary Principles. Where the Chapter is not expressly mentioned, it means that the cross-reference refers to the same Chapter: see *infra* 2/ii.c. Precaution and Sustainable Development.

- The masculine is usually employed in this thesis, albeit in a non-gender-specific way to denote both men and women without any offence being intended to women.

3. Evolutionary Perspective of Sustainable Development

i. Sustainable Development and Equilibrium State

The complexity of sustainable development in terms of its nature and conceptualisation is but a reflection of the complexity of its origins and evolution. All too often, the 1987 WCED Report is credited with the creation of sustainable development. Such an attribution however, is partial and inaccurate. Whilst a milestone in the popularisation of the terms, and an important factor in the consideration of the issue in the United Nations, 1987 WCED Report constitutes *one* stage, not the source, of sustainable development.

Sustainable development draws its origins in the late 1960 early 1970s, from the politico-economic discourse on the limits to growth, in a general context of economic, social and emerging environmental crisis. A landmark contribution to this debate and to the emergence of sustainable development was made by the project on the predicament of Mankind, commissioned by the 'Club of Rome'⁽¹⁹⁹⁾ in 1968, to evaluate the future trends of human society and the global economic, social, political and ecological system. In this perspective, an extremely complex computerised world model was set up, that

(199) The Club of Rome is an informal college of personalities representing different disciplines and from different countries. First convened in 1968, on a purely private initiative to foster the understanding of the various interdependent components -economic, social, political and natural- of the global system and promote new policy initiatives, the Club was originally composed of 30 scientists, educators, humanists, industrialists, and national and international civil servants coming from 10 different countries. By 1972, the membership of the club had increased to 70 persons from 25 different nationalities. The Club commissioned D. H. Meadows, D.L. Meadows and J. Randers to compile a computerised study on the various alternative evolution of the global system, that became to be known as the Club of Rome Report, subsequently published under the forewarning title *The Limits to Growth, A Report of the Club of Rome's Project on the Predicament of Mankind* (Earth Island, 1972) (hereafter, *The Limits to Growth*).

integrated the variables - viz. variations in the level or physical quantities- associated with the following five major areas of concern:

- 1) accelerating industrialisation and economic growth;
- 2) rapid population growth;
- 3) food shortage and widespread malnutrition;
- 4) depletion of non renewable resources;
- 5) environmental deterioration.

The aim of the project was to predict possible future growth trends, and identify the most viable alternative, simply by programming the computer to produce pictures of the various future states of affairs given changes in the variables. The conclusions of the report were clear: if the present growth trends in the world population, industrialisation, pollution, food production and resources continue unchanged, the limits to growth will be reached sometime within the next hundred years. The most probable result will be a sudden and uncontrollable decline in both population and industrial capacity (growth-and-collapse behaviour). The Report identified however a possible way to alter the growth trends and establish a condition of ecological and economic stability that is 'sustainable far into the future': the state of equilibrium, in other words, a zero-growth of the population and the economy.

The experience was reiterated twenty years later, and the same conclusions were reached, with one additional remark: despite man's technological capacity and stronger environmental awareness, sustainable environmental limits have now been reached⁽²⁰⁰⁾. The Club of Rome's world model has remained, and was then largely perceived, as a purely rhetorical model, besides imperfect, oversimplified and unfinished. It was based on strictly programmed information and did not for instance account for the unpredicted or 'unpredictable' elements such as epidemics, wars, or technological progress. It was also largely unrealistic for the drastic policies and unacceptable state interventions into both familial and economical circles it implied, not to mention the renunciation of acquired privileges and luxury. The Report was finally largely dismissed as a prediction of doom.

The conclusions of the Club of Rome's Report were, for a great part, echoed in the *Blueprint for Survival* published by *The Ecologist* the same year:

«The principal defect of the industrial way of life with its ethos of expansion is that it is not sustainable. We can be certain that sooner or later

⁽²⁰⁰⁾ Meadows *et al.*, *Beyond the Limits, Global Collapse or a Sustainable Future*, (Earthscan, 1992).

it will end, whether against our will, in a succession of famines, epidemics, social crises and war, or because we wanted to.»⁽²⁰¹⁾

In the same way as the Club of Rome, *The Ecologist* concluded that the combination of increase in human beings and in *per capita* consumption had an unsustainable impact on the environment in terms of both the resources taken from it, and the pollution imposed on it. *Homo Sapiens Industrialis* is assimilated to a bull in a china shop, with the only difference that the bull might try to adapt its behaviour to its environment should it have the capacity to realise the fragility of the merchandise, whilst man tends rather to expect his environment to adapt to him⁽²⁰²⁾.

The Ecologist's Blueprint defined a *sustainable society* as a *stable society*⁽²⁰³⁾, close to the Club of Rome's *equilibrium state*, and implied controlled and well-orchestrated changes on several fronts:

- 1) minimisation of the disruption of ecological processes generated by the introduction of foreign substances such as pesticides, fertilisers, domestic sewage or industrial wastes, or by the correction of the existing ones;
- 2) maximisation of the conservation of stocks (free use of the flow) of materials and energy;
- 3) stabilisation of the population;
- 4) new decentralised social system, such as to reinforce the community feeling and global awareness of the consumers. *The Ecologist* indeed assumes that the community feeling, essential in conservative actions involving restrictions, is eroded in an heterogeneous congeries of strangers sharing few common interests, and no real common future;
- 5) an integrated perspective of economic growth, new technologies, pollution, use of natural resources and population in a common and global 'programme for survival'.

Despite the fundamentally pessimistic nature of their message and the rhetorical character of the alternative suggested, both reports were nonetheless the first articulated expressions of sustainable development. Besides, they both raise a number of extremely important issues thenceforth constantly associated with sustainable development⁽²⁰⁴⁾, namely:

(201) 'A Blueprint For Survival', 2 *The Ecologist* (1972), Para. 110. See also updated and complemented diagnosis of the environmental crisis published 20 years later, *The Ecologist, Whose Common Future? Reclaiming the Commons* (Earthscan, 1993).

(202) *Supra* n. 201, Para. 129.

(203) *Supra* n. 201, Paras. 210 *et sequ.*

(204) Porter & Welsh Brown, *Global Environmental Politics* (Westview, 1991), Chap. 1.

- 1) the needs for quantitative restraints on growth owed to the 'finiteness' and assimilative ceilings of the ecosystem;
- 2) the necessity to follow an integrated and pluridisciplinary approach to environmental matters;
- 3) the inherent limits of technological solutions and remedies.

ii. Environment versus Development

In a context of economic development crisis, and in the light of the radical change in the United Nations political constellation⁽²⁰⁵⁾, it comes as no surprise that the 'no-growth' conception of sustainable development found no fertile ground at the first ever international Conference on global environmental issues, held at Stockholm in 1972. The *no-growth philosophy* was wholly unacceptable, and indeed constituted an affront to the dignity of the majority of mankind that had not yet managed to fulfil most of its most basic needs⁽²⁰⁶⁾. The 1972 Stockholm Declaration on the Human Environment was, on the contrary, firmly directed towards future development of techniques -«the capability of man to improve the environment increases with each passing day»⁽²⁰⁷⁾-, and revitalisation of the Third World economy.

The development versus environment conflict haunted the whole Conference⁽²⁰⁸⁾, and despite repeated attempts *inter alia* from the part of the Conference Secretary to follow a more conciliatory and integrated perspective of both requirements, developing States would not abandon their rigid antagonistic conception of environment and development, and displayed an extreme reticence to international environmental standards or obligations in general. They considered environmental problems to be essentially the concern and the responsibility of industrialised countries, and perceived environmental

(205) As from 1965, industrialised States lost their numerical majority as a result of the massive adhesion of newly independent 'developing' States.

(206) Sicault & Kiss, 'La Conférence des Nations Unies sur l'environnement (Stockholm, 5-16 juin 1972)', 18 *AFDI* (1972), 603, at 612; also Morgan, 'Stockholm : the Clean (but Impossible) Dream', 8 *Foreign Policy* (1972), 149, at 152.

(207) Preambular Para. 5; also Princ. 8, 9 and 18.

(208) The Conference was largely dominated by the North-South, as part of the East European communist bloc including Albania, Bulgaria, Cuba, Hungary, Poland, Czechoslovakia, and the Soviet Union, boycotted the Conference over the failure to convene the German Democratic Republic as a participant; Caldwell, *International Environmental Policy*, 57. Communist States have also long considered environmental problems as a result of capitalist greed and private ownership; Porter & Welsh Brown, *ibid. supra* n. 204. The position of communist States was even strengthened by the events in North Vietnam, largely considered as yet another manifestation of US imperialism, and in fact, many at the Conference feared that environmental issues on Agenda would be overshadowed by political antagonism; brief description of the political context in Morgan, *ibid. supra* n. 206.

protection measures as 'duplicitous efforts to retard economic growth in the third world'(209). Developing States were far more concerned with the promotion of a new international economic (and marine) order than with the protection of the environment(210).

The final Declaration and the Action Plan widely reflected the preoccupation of developing States(211). The Stockholm Declaration on Human Environment stated explicitly that «the developing countries should direct their effort to development»(212), and emphasised that «environmental policies of States should enhance and not adversely affect the present or future development potential of developing countries»(213) with due account taken of «the circumstances and particular requirements of developing countries»(214). The principles of common but differentiated responsibility(215), compensation(216) and additionality(217) were also embodied in the Action Plan(218).

Hence, whilst sustainable development in the sense understood in this thesis underpinned in many ways the 1972 Conference on Human Environment(219), it was not

(209) Haas, 'Obtaining International Environmental Protection through Epistemic Consensus', 19 *Millennium* (1990), 347; also Caldwell, *International Environmental Policy*, 56 *et sequ.*; Leonard & Morell, 'Emergence of Environmental Concern in Developing Countries: A Political Perspective', 17 *Stanford JIL* (1981), 281. The negotiation of each principle is reviewed in detail in Sohn, 'The Stockholm Declaration on Human Environment', 14 *Harvard ILJ* (1973), 433. Sicault and Kiss attribute such fear to the disappointing result on development aid at UNCTAD, held only days before the Stockholm Conference; *supra* n. 206.

(210) Environmental protection is besides barely mentioned in the 1974 NIEO Declaration and NIEO Programme of Action and in the 1975 Economic Charter; see *infra* Chap. 2/2/ ii. Sovereignty over Economic Assets and Policy in a New International Economic Order, and Chap. 5/2/ iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership.

(211) Porter & Welsh Brown, *ibid. supra* n. 204.

(212) Preambular Para. 4.

(213) Princ. 11.

(214) Princ. 12.

(215) The Principle of common but differentiated responsibility is also mentioned; Stockholm Declaration on Human Environment, Princ. 13 and Action Plan, Recommend. 102-109.

(216) Action Plan, Recommend. 103.

(217) Action Plan, Recommend. 109 *in fine*.

(218) See Founex Report, *infra* n. 232, at 13, and further *infra* Chap. 5/3/i. Financial Assistance: Additionally and Compensation.

(219) A majority of principles studied in the thesis were already embodied in the 1972 Stockholm Declaration; in fact, a combined reading of Princ. 2 and 3, respectively referring to future generations and the necessity to preserve the capacity of the earth to produce vital natural resources, would give a definition of the preservation of the human environment that is not so far from the classic definition of sustainable development mentioned above, *supra* n. 82.

explicitly enshrined in the final documents, probably in the light of the pessimistic connotation attached to it then, and most importantly in the light of the reluctance of the new numerical majority at the United Nations to link environment and development, and indeed support international environmental measures. Likewise, no proper environmental charter was negotiated, that would impose specific obligations on governments, in order to fulfil the aspirations of the world's people for a better environment. 1972 Stockholm Declaration on the Human Environment remained but a non-binding declaration, couched in terms of general principles more than in terms of concrete obligations⁽²²⁰⁾.

Nevertheless, Stockholm announced a departure from traditional approaches to environmental issues towards a more 'sustainable' perspective on several aspects:

Firstly a more global and genuinely international perception of environmental issues is substituted for the then prevailing conception of protection of the environment as a matter of good neighbourhood to be solved on a bilateral basis, or at the national level exclusively⁽²²¹⁾. As one author wrote in the early 1970s, it had become clear that:

«the entire ecology of the planet is not arranged in national compartments; and whoever interferes seriously with it anywhere is doing something that is doing something that is almost invariably of serious concern to the international community at large.»⁽²²²⁾

Environmental rules thus shifted from rules of coexistence, to genuine rules of co-operation⁽²²³⁾. Far from constituting an surrender of national sovereignty however, such a perception stressed on the contrary, the necessity for the States to exercise such a power collectively, with a greater sense of responsibility for common goods⁽²²⁴⁾.

«To achieve this environmental goal will demand the acceptance of responsibility by citizens and communities and institutions at every level, all sharing equitably in common effort (...) A growing class of environmental problems, because they are regional or global in extent or because they affect

(220) Sohn, *supra* n. 209, at 513.

(221) Paradoxically however, the responsibility for the implementation of the various recommendations of the Action Plan was divided between the relevant UN bodies and agencies (FAO, UNESCO, WHO, WMO...) and resulted in a restoration of the sector-based approach at the implementation level; Munn, 'Toward Sustainable Development', 26 *Atmospheric Environment* (1992), 2725.

(222) Kennan, 'To Prevent a World Wasteland', 48 *Foreign Affairs* (1970), 401.

(223) Beyerlin, 'Rio-Konferenz 1992: Begin einer globalen Umweltrechtsordnung?', 54 *ZöoRV* (1994), 124, at 127; see further *infra* Chap. 2/2. Objects of Permanent Sovereignty: From Mineral Resources to Environmental Policy, and Chap. 5/1. Introduction.

(224) Caldwell, *International Environmental Policy*, at 22; Sands, 'The Environment, Community and International Law', 30 *Harvard ILJ* (1989), 393; see further *infra* Chap. 2/2/iii. versus Globalisation of Environmental Standards and Policies, and Chap. 3/2/ii/b. 1972 Stockholm Declaration on the Human Environment: Institutionalisation of Prevention.

the common international realm, will require extensive co-operation among nations...»(225)

Cautiously worded, the above statement departed nonetheless from the classic understanding reasserted on the eve of the Conference that:

«as a general rule, [standards to preserve the environment] will have to be defined at the national level and, in all cases, will have to reflect conditions and systems of values prevailing in each country.»(226)

Secondly, environmental issues were no longer taken in isolation (compartmentalised, sectoral approach), but in their interrelation with other issues, such as poverty(227), population growth(228), urbanisation(229), economic development(230) and human rights(231), reflecting the factual interrelatedness of these processes (holistic, interdisciplinary approach)(232).

Thirdly, intergenerational equity, already acknowledged in previous conventions(233), was clearly affirmed, recreating the link between past, present and future generations, in

(225) 1972 Stockholm Declaration on the Human Environment, preamble Para. 7.

(226) UNGA Res.A/2849(XXVI), 20 December 1971 on Environment and Development; the resolution was adopted with 85 votes in favour, 34 abstentions, and 2 oppositions (US and UK).

(227) 1972 Stockholm Declaration on the Human Environment, introductory Para. 4, and Princ. 8 to 14.

(228) *Ibid.*, introductory Para. 5, and Princ. 19.

(229) *Ibid.*, Princ. 15.

(230) *Ibid.*, introductory Para. 2.

(231) *Ibid.*, introductory Para. 1, and Princ. 1.

(232) Kiss & Shelton, *International Environmental Law*, at 155 *et sequ.*; Kiss, *Will the Necessity to Protect the Global Environment Transform the Law of International Relations?*, Occasional Paper, (Hull University Press, 1992), at 6 *et sequ.*; Beyerlin, *supra* n. 223, at 127; Dupuy, 'Où en est le droit international de l'environnement à la fin du siècle?', 101 *RGDIP* (1997), 873. For a more factual discussion of the interrelation of environmental processes, see for instance Tolba, *Saving Our Planet, Challenges and Hopes* (Chapman & Hall, 1992). See further *infra* Chap. 2/2/iii. versus Globalisation of Environmental Standards and Policies, and Chap. 3/2/ii/b. 1972 Stockholm Declaration on the Human Environment: Institutionalisation of Prevention. The interrelatedness of environmental, economic and social issues, and indeed the necessity to adopt an integrated approach to environment and development was even more clearly expressed by a panel of experts convened at Founex, Switzerland, in June 1971, to explore development and environmental challenges. The resulting Founex Report is the first comprehensive document on the issue of environment and development; *Environment and Development, The Founex Report on Environment and Development, Submitted by a Panel of Experts Convened by the Secretary-General of the United Nations Conference on the Human Environment, 4-12 June 1971, Founex, Switzerland*, in *International Conciliation* No. 586 (Carnegie Endowment for International Peace, 1972), 7.

(233) 1945 Charter of the United Nations, preambular Para. 1; 1946 International Convention for the Regulation of Whaling, preambular Para. 1; 1968 African Convention on Nature, preambular Para. 6; also 1970 Strategy for the Second Development Decade, Para. 4. See *infra* Chap. 4/3/ii. Legal Basis for a Planetary Trust: Intergenerational Equity as a Fundamental Principle Deeply Rooted in International Law.

sharp contrast with the traditional conception of international obligation as obligations between contemporaneous members.

«To defend and improve the human environment for present and future generations has become an imperative goal for mankind...»⁽²³⁴⁾

Fourthly, the 1972 Stockholm Conference secured its place in the contemporaneous history with the adoption of the first global action plan for the environment although little was undertaken to implement it and secure its follow-up⁽²³⁵⁾. The Conference constituted a springboard and set the institutional basis for future developments in international environmental law⁽²³⁶⁾.

iii. Sustainable Development

A major contribution towards the transposition of sustainable development in international environmental discourse was taken with IUCN/WWF/UNEP's *World Conservation Strategy*⁽²³⁷⁾. Construed as an intellectual framework and practical guidance for the conservation actions necessary to achieve a sustainable development, the *World Conservation Strategy* was confined to the exploitation of living or self-renewable resources, to the exclusion of non renewable natural resources. Of particular interest is the redefinition of two core actions, *viz.* development and conservation, that have both undoubtedly inspired the WCED's classic definition of sustainable development.

(234) 1972 Stockholm Declaration on the Human Environment, preamble Para. 6; also Para 7 and Princ. 1 and 2. UNEP was created to preserve and improve the environment for 'present and future generations'; see founding UNGA Res. A/2997(XXVII), 15 December 1972, on Institutional and Financial Arrangements for International Environmental Cooperation, preambular Para. 1.

(235) Some authors consider in fact, that the decade that immediately followed the Conference was characterised by the virtual disappearance of the environmental matters from national political agenda despite the fact that the implementation of the Stockholm Action Plan rested primarily upon national action; Munn, 'Toward Sustainable Development, An Environmental Perspective', 2 *Development, Journal of SID* (1989), 70.

(236) On the impact of the Conference on the general development of international environmental law, see Birnie & Boyle, at 39 *et sequ.*; Caldwell, *International Environmental Policy*, at 59 *et sequ.*; Sands, *Principles*, (Vol. I), at 34 *et sequ.*; Kiss, 'Dix ans après Stockholm. Une décennie de droit international de l'environnement', 28 *AFDI* (1982), 784; Kiss & Shelton, *International Environmental Law*, 41 *et sequ.*; Sohn, *ibid. supra* n. 209. See also ASIL, 'Ten Years after Stockholm - International Environmental Law', 79 *ASIL Proc.* (1983), 411; Maffei, *La protezione internazionale delle specie animali minacciate* (CEDAM, 1992), 295 *et sequ.*; Sicault, & Kiss, 'La Conférence des Nations Unies sur l'environnement (Stockholm, 5-16 juin 1972)', 18 *AFDI* (1972), 603, and anonymous Note: 'New Perspectives on International Environmental Law', 82 *Yale LJ* (1973), 1658, attributed to Schneider by Picone in 'Obblighi reciproci ed obblighi *erga omnes* degli Stati nel campo della protezione internazionale dell'ambiente marino dall'inquinamento', in Starace (ed.), *Diritto internazionale e protezione dell'ambiente marino* (Giuffrè, 1983), 15, at 28 n. 27.

(237) IUCN/UNEP/WWF, *World Conservation Strategy* (IUCN/UNEP/WWF, 1980).

Development was defined as «the modification of the biosphere and the application of human, financial, living and non-living resources to satisfy human needs and improve the quality of human life». To be sustainable, «development must take account of social and ecological factors, as well as economic ones; of the living and non-living resource base; and of the long term as well as the short term advantages and disadvantages of alternative actions» (238). Conservation would command such a management of human use of the biosphere that «may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations». Conservation was construed as a positive action that embraced «preservation, maintenance, sustainable utilisation, restoration, and enhancement of the natural environment»(239).

The 'separate' consideration of development and conservation was subsequently abandoned in the 1990 update of the *World Conservation Strategy*, for a more holistic vision of 'sustainable societies' both people-centred, and conservation-based(240). The *World Conservation Strategy* constituted an important source of reference for WCED's work on sustainable development.

A major factor in the introduction of sustainable development in the UN fora however, was the progressive change in the attitude of developing countries towards international environmental action, hence the creation of a broadly favourable atmosphere to a more integrated perspective of environment and development clearly implied by sustainable development. Such change in attitude can be attributed to three major factors(241):

- 1) the link increasingly drawn between environmental degradation and poverty illustrated that environment was not merely a problem of rich industrialised nations but indeed also a matter of concern to poorest nations(242);

(238) *Ibid. supra* n. 237, Chap. 1, Para. 3.

(239) *Ibid. supra* n. 237, Chap. 1, Para 4.

(240) IUCN/UNEP/WWF, *Caring for the Earth* (IUCN/UNEP/WWF, 1991), Chap. 1. Sustainable societies have been purposely put in the plural, for there is not *one* unique definition of sustainable society, but only a series of broadly described principles and actions forming the basic structure of such a society, meant to be interpreted and adapted by each community according to its specific circumstances; *ibid.*, at 8.

(241) Kiss & Shelton, *International Environmental Law*, at 50 *et sequ.* and Leonard & Morell, *supra* n. 209.

(242) The link was already acknowledged at Stockholm, and by the Panel of experts convened at the initiative of the Secretary General of the 1972 Stockholm Conference a year before, although at the time the issue was perceived as one of priority -eradication of poverty *via* development first- rather than one calling for interrelated and simultaneous action. This question made by Indian Prime Minister speaking for the G77 is particularly illustrative in this respect: «How can we speak to those who live in the
(continued)

- 2) the recognition of a close interrelatedness between environment on the one hand, and health, food, social progress on the other;
- 3) the realisation of the important risk entailed by exportation of hazardous production by foreign northern companies to countries where environmental regulation was non-existent or flexibly applied, and the responsibility finally rests upon developing States to cope with the environmental damage caused by unsafe use of such technology⁽²⁴³⁾.

The first illustration of the change in attitude of developing States towards environmental matters was reflected in the adoption of the World Charter for Nature in 1982⁽²⁴⁴⁾. The failure to adopt a binding text enumerating clear environmental rights and obligations has been a long-standing subject of scholarly debate, inflamed by the scarcity of concrete actions undertaken in furtherance of the 1972 Stockholm Declaration on Human Environment. In September 1975 already, in a speech delivered to 12th general assembly of the IUCN held in Kinshasa, ex-Zaire, Mobutu Sese Seko re-launched the idea of the formulation of global environmental principles in a World Charter for Nature. A set of general principles of conduct of both States and individuals limited to the conservation of *living* natural resources was elaborated by the IUCN panel of experts,

villages and in the slums about keeping the oceans, the rivers, and the air clean, when their own lives are contaminated? Are not poverty and need the greatest polluters?»; quoted after Leonard & Morell, *supra* n. 209, at 282. For a particularly vibrant account of the link between developmental policies, poverty and environmental degradation on the African continent, see Timberlake, *Africa in Crisis, The Causes, the Cures of Environmental Bankruptcy*, (new edn, East African Educational Publishers, 1985). Timberlake then already mentioned sustainable development which he defines rather poetically as a development «which takes from the land only as fast and as much as the land can provide, which puts back into the land as much as it takes from it»; *ibid.* at 5.

(243) The risk was more particularly illustrated with the Bhopal disaster in 1984. The sudden release of methyl isocyanate at the US Affiliate Union Carbide pesticide plant, left over 2,800 dead and 20,000 injured. The thousands of individual applications for indemnification are being processed by Indian Courts, after US Courts dismissed all individual actions on the ground of *forum non conveniens*. By the mid 1995, more than ten years after the disaster had occurred, only 12 000 files had been considered, with over 6000 more to consider; and derisory compensation (an average of US \$ 6000 per life) was granted on the basis of strict (but never published) criteria, in only 6 600 cases; see M.L. Bouguerra, 'Persistente impunité du pollueur', *Le Monde Diplomatique*, June 1995, at 11. In 1985, the Bhopal Gas Leak Disaster Act was passed, arrogating the exclusive power to act for the damages caused by the disaster to the Indian Government; Anderson, 'Individual Rights to Environmental Protection in India', in Boyle & Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, 1996), Chap. 10, at 216. A US \$ 470 million out-of-court settlement between the Union Carbide Corporation and the Indian Government was confirmed by the Indian Supreme Court on 19 February 1989, thereby exonerating the US registered Company of any criminal responsibility for the 6600 to 19 000 dead (depending on the sources) and many more injured after some toxic gas leaked from its subsidiary pesticide manufacturing plant in India. Public outcry however forced the Supreme Court to review its decision and consider the criminal responsibility of the US company; Lefeber, *Transboundary Environmental Interference and the Origin of State Liability* (Kluwer law International, 1996), 252 *et sequ.*

(244) Some authors see in the WCN the first expression of sustainable development; Koester, 'From Stockholm to Brundtland', 20 *EPL* (1990), 14, at 15.

modelled upon the 1948 Universal Declaration of Human Rights. The principles were submitted to the UN General Assembly by the delegation of Zaire, with the support of the Organisation of African States. The World Charter for Nature was nearly unanimously endorsed by UN General Assembly in October 1982, solely opposed by the US⁽²⁴⁵⁾.

The Charter, a genuine 'moral code of action'⁽²⁴⁶⁾, acknowledges the interrelatedness of every form of life, economic, social and political stability and environmental preservation⁽²⁴⁷⁾, and extensively addresses, albeit without expressly referring to it, the idea of sustainable consumption.

«Lasting benefits from nature depends on the maintenance of essential ecological processes and life support systems, and on the diversity of life forms, which are jeopardised through excessive exploitation and habitat destruction by man.»⁽²⁴⁸⁾

The yardstick of sustainable utilisation of living natural resources or ecosystems lies in the optimum sustainable yield, which introduces a margin of error, due for instance to inadequate or inaccurate data, and a safety margin to cover unpredictable events⁽²⁴⁹⁾. Whilst adopted in the form of a non-binding United Nations General Assembly resolution, the World Charter for Nature represented nonetheless the first consensus endorsement of sustainable development by States⁽²⁵⁰⁾, and paved the way for further development of international environmental law⁽²⁵¹⁾; some of its provisions were

(245) And with 18 abstentions, most of them Amazonian States. On the history of the World Charter for Nature, see Burhenne & Irwin, *The World Charter for Nature*, Beiträge Zur Umweltgestaltung Vol. A 90, 2nd revised edn (Erich Schmidt, 1986), B; Wood, 'The United Nations World Charter for Nature: The Developing Nations' Initiative to Establish Protection for the Environment', 12 *Ecology LQ* (1985), 977. See also Caldwell, *International Environmental Policy*, at 90 *et sequ.*

(246) Preambular Para. 3(a); the 1989 Basel Convention on Transboundary Movement of Hazardous Wastes qualifies the Charter as the expression of rules of ethics in respect of environment and conservation of natural resources; preambular Para. 14. For a 'definitive study' on the regime hazardous wastes management, see Kummer, *International Management of Hazardous Wastes: The Basel Convention and Related Legal Rules* (Clarendon, 1995).

(247) Preambular Paras. 2(b) and 4(b).

(248) Preambular Para. 4(a).

(249) Para. 1(4). See also Para. 10, dealing extensively with the direct use, re-use and recycling of natural resources.

(250) One should mention that the expression of sustainable development had already previously been used in international instruments; see for instance 1980 Strategy for the Third Development Decade, Para. 44.

(251) Birnie, 'International Environmental Law : its Adequacy for Present and Future Needs', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 2, at 81.

subsequently reflected in treaty law⁽²⁵²⁾. For Caldwell, the World Charter for Nature is no less than «the Decalog of the International Environmental Movement, and the World Conservation Strategy (...) its expression in practice»⁽²⁵³⁾.

The document to which sustainable development is usually associated with is the Report prepared by the World Commission on Environment and Development, commissioned by the General Assembly in the mid 1980s to examine the relationship between environment and development, and to formulate realistic proposals to address those issues in the future⁽²⁵⁴⁾. The reputation of the Report is mostly due to the fact that it was the first document to offer an accessible, non technical presentation of the debate on sustainable development.

The WCED Report was based on the premise that the successes and achievements in national and international societies are widely undermined by failures in the development and management of the human environment. In terms of absolute numbers, there are more hungry, illiterate people and people deprived of home, water and fuelwood than ever before, and the gap between rich and poor is widening. Environmental trends threatening the integrity of the planet are qualitatively and quantitatively increasing, and with them, the future of the world societies⁽²⁵⁵⁾. WCED Report did not purport however to be «a prediction of ever increasing environmental decay, poverty and hardship in an ever more polluted world among ever decreasing resources»; rather, it was intended to be an affirmation of the «possibility for a new area of economic growth, one that must be based on policies that sustain and expand the environmental resource base»⁽²⁵⁶⁾.

Notwithstanding the fact that the report itself has examined the common challenges in separate chapters⁽²⁵⁷⁾, WCED considered there is no separate environmental, developmental, energy or demographic crises but indeed interlocking crises; «[e]cology

(252) The Charter was most notoriously echoed in the 1985 ASEAN Agreement on the Conservation of Nature; reference is also made to it in the 1989 Basel Convention on Transboundary Movement of Hazardous Wastes, *supra* n. 246.

(253) Caldwell, *International Environmental Policy*, at, 93.

(254) UNEP GC Dec. 11/3, on the Process of preparation of the environmental perspective to the year 2000 and beyond, GAOR 38th Session, Suppl. No. 25 (A/38/25), Annex; endorsed by UNGA, A/Res./38/161, 19 December 1983 on the Process of preparation of the environmental perspective to the year 2000 and beyond. The Commission became known as the World Commission on Environment and Development.

(255) *Our Common Future* (Oxford University Press, 1987), 29 *et sequ.*

(256) *Ibid. supra* n. 255, p.1.

(257) *Ibid. supra* n. 255, Chap. 4-9.

and economy are becoming even more interwoven - locally, regionally, nationally and globally - into a seamless net of causes and effects»⁽²⁵⁸⁾, that call for an integrated perspective to environment and development. To address this complex system of causes and effects, the WCED suggested its own path, largely inspired from the *World Conservation Strategy*.

WCED was not only aware of the risks inherent in economic growth, «economic growth always brings risks of environmental damage, as it put increased pressure on environmental resources»⁽²⁵⁹⁾. It was also conscious that economic development is necessary to eradicate another important source of environmental stress, that is poverty: The zero-growth alternative was thus ruled out. As one author suggested, «the maxim for sustainable development is not 'limits to growth'; it is 'the growth of limits»⁽²⁶⁰⁾.

WCED introduced sustainable development as

«a framework for the integration of environment policies and development strategies in order to assure that growing economies remain firmly attached to their ecological roots and that these roots are protected and nurtured so that may support growth over the long term».⁽²⁶¹⁾

Like the World Conservation Strategy, WCED report recognised that there is no single blueprint of sustainability, but rather several paths proper to each nation and leading to the same objective. On the other hand, these paths are guided by common general principles, reflected in 1986 WCED-EG Legal Principles for Environmental Protection and Development.

The Brundtland report was wholly endorsed by the UN General Assembly the same year of its publication⁽²⁶²⁾. At the same session, the Assembly approved UNEP's *Environmental Perspective to the Year 2000 and Beyond*⁽²⁶³⁾, that restates more or less WCED's conclusions and recommendations, as a framework to guide national action and

(258) *Ibid. supra* n. 255, 5.

(259) *Ibid. supra* n. 255, 40.

(260) MacNeil, 'Sustainable Development, Meeting the Growth Imperative for the 21st Century', in Angell *et al* (eds.), *Sustaining Earth: Response to the Environmental Threat* (Macmillan, 1990), Chap. 17, at p.196.

(261) *Ibid. supra* n. 255, 40.

(262) UNGA, A/Res./42/187, 11 December 1987.

(263) Endorsed by and annexed to UNGA, A/Res.42/186, 11 December 1987. See also 1988 Regional Strategy for Environmental Protection and Rational Use of Natural Resources in ECE Member Countries Covering the Period up the Year 2000 and Beyond.

international policies⁽²⁶⁴⁾. In December 1989, the General Assembly called for the Conference on the Environment and Development,

«to elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of strengthened national and international efforts to promote sustainable and environmentally sound development in all countries.»⁽²⁶⁵⁾

Whilst the Conference has not created the expression of sustainable development, it has clearly attributed a certain legal existence, if not to the ideas underpinning sustainable development, already discussed at the 1972 Stockholm Conference on Human Environment, at least to the expression of sustainable development itself. It is the purpose of the thesis, to consider how far this legal mutation of sustainable development has been reflected in international environmental law.



(264) For an evaluation of the actual impact of the WCED Report and its endorsement at the national and international level, see Starke, *Des raisons d'espérer, préparer notre avenir commun* (Frison Roche, 1992).

(265) 1989 Resolution 44/228, on United Nations Conference on Environment and Development, Para. 3.

CHAPTER TWO.
TERRITORIAL INTEGRITY, SOVEREIGNTY AND PERMANENT SOVEREIGNTY
OVER NATURAL RESOURCES

1. <u>Introduction</u>	53
2. <u>Objects of Permanent Sovereignty: From Mineral Resources to Environmental Policy</u>	56
i. Sovereign Control over, and Exploitation of Mineral Resources and other Natural Assets.....	56
ii. Sovereignty over Economic Assets and Policy in a New International Economic Order.....	63
iii. Sovereignty over Environmental Resources and Environmental Policies versus Globalisation of Environmental Standards and Policies.....	68
3. <u>The Principle of Permanent Sovereignty over Natural Resources: a Principle of Customary Law</u> ..	87
4. <u>Permanent Sovereignty over Natural Resources: Limits and Constraints</u>	92
i. Classic Conception of Absolute and Unlimited Sovereignty	92
ii. Towards a Limited Sovereignty over Natural Resources.....	96
a. <i>Equitable Utilisation, Sic Utere Tuo and Related No Substantial Transboundary Harm Principles</i>	97
b. <i>Limits Flowing from General International Law</i>	105
c. <i>Limits Arising from General Environmental Considerations</i>	107
5. <u>Concluding Comments</u>	114

1. Introduction

The principle of permanent sovereignty over natural resources⁽¹⁾ is widely regarded as a supreme attribute of permanent, full and sovereign statehood under international

(1) See generally on permanent sovereignty over natural resources: Birnie & Boyle, 112 *et sequ.*; Bouveresse, *Droit et politiques du développement et de la coopération* (Presses Universitaires de France, 1990), Second Part, Chap. 2; Brownlie, 'Legal Status of Natural Resources in International Law', 162 *RdC* (1979-I), chapter II (hereafter Brownlie, 'Legal Status of Natural Resources in International Law'); Elian, *The Principle of Sovereignty over Natural Resources* (Sijthoff & Noordhoff, 1979) (hereafter Elian, *The Principle of Sovereignty over Natural Resources*); Fischer, 'La souveraineté sur les ressources naturelles' 8 *AFDI* (1962), 516; Gess, 'Permanent Sovereignty over Natural Resources', 13 *ICLQ* (1964), 398; Hyde, 'Permanent Sovereignty over Natural Wealth and Resources', 50 *AJIL* (1956), 854; *Quoc Dinh: Droit International Public*, §§ 308 *et sequ.*; Rajan, *Sovereignty over Natural Resources* (Humanities Press, 1978) (hereafter, Rajan, *Sovereignty over Natural Resources*); Rosenberg, *Le principe de la souveraineté des États sur leurs ressources naturelles* (LGDJ, 1983) (hereafter Rosenberg, *Le principe de la souveraineté des États sur leurs ressources naturelles*); Schwebel, 'The Story of the UN's Declaration on Permanent Sovereignty over Natural Resources', 49 *American Bar Association Journal* (1963), 463; Subrata Roy Chowdhury, 'Permanent Sovereignty Over Natural Resources', in Hossain and Chowdhury (eds.), *Permanent Sovereignty Over Natural Resources* (Frances Printer, 1984), Chap. 1; Sands, *Principles* (Vol. I), 186 *et sequ.*

law⁽²⁾. First raised in the late 1950s, in connection to the decolonisation process, permanent sovereignty over natural resources was originally held as a 'basic constituent' of the right to self-determination⁽³⁾; it was essentially invoked by 'new' States to

(2) UNGA, A/Res./626 (VII), 21 December 1952, on the Right to Exploit Freely Natural Wealth Resources, for instance, proclaims that «the right of people to use and exploit their natural wealth and resources is inherent in their sovereignty»; also UNGA 1962 landmark Resolution on Permanent Sovereignty over Natural Resources (preambular Para. 4); the International Covenant on Civil and Political Rights, and Social Economic and Cultural Rights, common Art. 47/25, which follows: «Nothing in the present Covenant shall be interpreted as impairing the *inherent right* of all peoples to enjoy and utilise fully and freely their natural wealth and resources» (emphasis added). See also Report of the Secretary General on the Exercise on Permanent Sovereignty Over Natural Resources and the Use of Foreign Capital and Technology for their Exploitation, A/8058, 14 September 1970.

In the doctrine: Brownlie, 'Legal Status of Natural Resources in International Law'; Cassese, *Self-Determination of People: A Legal Reappraisal* (Cambridge University Press, 1995), 55-57; *Quoc Dinh: Droit International Public*, § 308; *Oppenheim's International Law*, Vol. 1, Chap. 3 (§§ 106 et sequ.); see also Elian, *The Principle of Sovereignty over Natural Resources*, 10; Rajan, *Sovereignty over Natural Resources*, Chap. 1; Schrijver, 'Permanent Sovereignty over Natural Resources versus the Common Heritage of Mankind', in de Waart et al. (eds.), *International Law and Development* (Martinus Nijhoff, 1988), 87. Some authors nonetheless would stick to the argument that permanent sovereignty, like the right to self-determination, has never ceased to be a purely political claim disguised in legal rights; O'Keefe, 'The United Nations and Permanent Sovereignty over Natural Resources', 8 *JWTL* (1974), 239; see *infra* 3. The Principle of Permanent Sovereignty over Natural Resources: a Principle of Customary Law. The existence of a sovereign legal right to permanent sovereignty over natural resources in international law, and to some extent to correlated right to nationalise or expropriate, was already generally agreed both by developing States and by former colonial Powers, when it was first suggested to embody such right in a resolution. The major point of dissent lies essentially (a) on the pertinence to affirm in an international document a right already consecrated nationally, and (b) the conditions of exercise of the rights; see *infra* 2/i. Sovereign Control over, and Exploitation of Mineral Resources and other Natural Assets.

(3) Brownlie, 'Legal Status of Natural Resources in International Law', and *Principles*, 539 and 597; Rajan, *Sovereignty over Natural Resource*, Chap. 1; Rosenberg, *Le Principe de souveraineté des États sur leurs ressources naturelles*, 131. The conjunction was consistently recalled in early statements of the principle, *inter alia* by UNGA resolutions: for instance 1960 Decolonization Charter, preambular Para. 8; A/Res./523 (VI), 12 January 1952, on Integrated Economic Development and Commercial Agreements; A/Res./626 (VII), 21 December 1952, on the Right to Exploit Freely Natural Wealth Resources; A/Res./837 (IX), 14 December 1954, Recommendations Concerning International Respect for the Right of Peoples and Nations to Self-Determination; 1960 Decolonisation Charter, Resolution (preambular Para. 8, and operational Para. 2); 1962 landmark Resolution on Permanent Sovereignty over Natural Resources (preambular Para. 2); A/Res./2158 (XXI), 25 November 1966, on Permanent Sovereignty over Natural Resources; A/Res./2386 (XXIII), 19 November 1968, on Permanent Sovereignty over Natural Resources; A/Res./2692 (XXV), 11 December 1970, on Permanent Sovereignty over Natural Resources of Developing Countries; A/Res./3016 (XXVII), 18 December 1972, on Permanent Sovereignty over Natural Resources of Developing Countries; A/Res./3037 (XXVII), 19 December 1972, on a Charter on Economic Rights and Duties of States; A/Res./3171 (XXVIII), 17 December 1973, on Permanent Sovereignty over Natural Resources; 1974 NIEO Declaration (Paras. 2, and 4(h) and (i)). See also the terms of reference of the Commission on Natural Resources, appointed in 1958 by the UNGA, via ECOSOC, on the proposal of the Commission on Human Rights. A/Res./1314 (XIII), 12 December 1958, Recommendations Concerning International Respect for the Right of Peoples and Nations to Self-Determination, mandated the Commission to conduct «a full survey of the status of this basic element of the right to self-determination».

During the drafting of or vote on the above resolutions, developing States delegations would often refer to economic self-determination, or economic sovereignty, thereby affirming the correlation between permanent sovereignty over natural resources and complete and permanent self-determination. Thus for instance, at the 13th Session of the General Assembly (1958), the Yugoslav representative stressed that
(continued)

counter continuing forms of 'hegemonical' influence of former colonial powers and other powerful States, and restore total and effective control over their natural resources still under foreign domination⁽⁴⁾.

It has since been consistently reaffirmed throughout and well beyond the decolonisation context⁽⁵⁾; it was most notably referred to in support of claims for a new international economic order. The principle was 'revived' more recently, in an attempt to withstand the process of 'internationalisation' of certain natural resources, for the sake of environmental conservation or the protection for the common interest of mankind.

The structure of this section is essentially three-fold: first, it considers the various phases in the evolution of the concept of permanent sovereignty over natural resources, and distinguishes those dimensions which are generally accepted as the components of a

the right of self-determination would remain «...a dead letter where people were unable to freely dispose of their natural wealth and resources...», thereby reaffirming the view previously expressed by a Polish delegate that "...Sovereignty was obviously one of the principal safeguards of the exercise and continued existence of the right of self-determination"; a Chilean representative resorted to a more accusatory tone, and suggested that «...any one who doubted the right of ownership on natural resources, *ipso facto* cast doubt on the right of self-determination itself». A similar line of argument was developed at length by Romania, at the 20th Session, which, using its own experience as example, argued that «...no country could consolidate its national independence, and ensure its economic progress, until it exercised full sovereignty over its own natural resources...», and it went on to suggest that «It was the prospect of losing their profits that made some Powers so utterly opposed to the right of self-determination and to national sovereignty over natural resources». All the above extracts are contained in Rajan, *Sovereignty over Natural Resource*, at 56-58; see further position of Bulgaria (*ibid.*, at 44), Ukraine (45), Chad and UAE (46), Ghana and Bolivia (47), Zambia (48), and Nicaragua (60).

The correlation between permanent sovereignty over natural resources and self-determination was acknowledged in the United Nations Council for Namibia's Decree on the Natural Resources of Namibia, 27 September 1974; it is interesting to note that in that case, the matter was not about sovereignty over natural resources as a necessary condition to full and permanent self-determination, but rather one of full and permanent sovereignty as a necessary condition to exercise permanent sovereignty over natural resources; the Council undertook to preserve Namibia's natural resources on behalf of the latter, itself not in a position to exercise that sovereign prerogative. The first operational paragraph of the Declaration hence reads:

«No person or entity, whether a body corporate or unincorporated, may search for, prospect for, explore for, take, extract, mine, process, refine, use, sell, export, or distribute any natural resource, whether animal or mineral, situated or found to be situated within the territorial limits of Namibia without the consent and permission of the United Nations Council for Namibia (...))»

The Decree is reproduced in 13 *ILM* (1974) 1513.

(4) Schachter, *Sharing the World's Resources* (Columbia University Press, 1977), 124 *et sequ.*

(5) As 'political' decolonisation proceeded, fulfilling aspirations to 'political' self-determination, States tended to concentrate on 'economic self-determination', and came progressively to assert the principle of permanent sovereignty over natural resources independently of any claim to political self-determination. The original correlation of the principle to self-determination was omitted in 1972 Stockholm Declaration on the Human Environment, Princ. 21, as well as in most subsequent reference to permanent sovereignty. This flows essentially from the fact that such link was factual, accidental (temporal coincidence), than legal.

legal principle of permanent sovereignty over natural resources under customary international law, from those which have remained essentially political incantations. It will then consider the actual implications of the principle, approaching the principle from the perspective of its limits, rather than its positive components; as it appears indeed, that the key and most disputed dimensions of permanent sovereignty in the particular context of international environmental law, pertain to its limitations, as much as to its positive implications.

Permanent sovereignty over natural resources is probably the 'oldest' and least contested principle among those considered in this thesis. Once considered an exclusive and absolute prerogative, it has increasingly become the object of interference or restrictions, as a result of the changing perspective of environmental regulations, as well as the intensification of inter-state relations, and related interdependence.

2. Objects of Permanent Sovereignty: From Mineral Resources to Environmental Policy

i. Sovereign Control over, and Exploitation of Mineral Resources and other Natural Assets⁽⁶⁾

The issue of permanent sovereignty over natural resources was first brought to the fore by a group of developing States particularly rich in mineral resources⁽⁷⁾, claiming to act in the vanguard of all the rest of developing countries, and fighting against economic remnants of the colonialist era towards complete emancipation⁽⁸⁾. Their major theme was the right to expropriate and nationalise asymmetric concessional arrangements, held

(6) More specifically on permanent sovereignty over oil resources and the right to nationalise: Mughraby, *Permanent Sovereignty over Oil Resources* (The Middle East Research & Publishing Center, 1966) (hereafter Mughraby, *Permanent Sovereignty over Oil Resource*), Chap. II and Part 4; O'Keefe, 'The United Nations and Permanent Sovereignty over Natural Resources', 8 *JWTL* (1974), 239. Also on oil resources: *Permanent Sovereignty over Natural Resources*, Report prepared by the Secretary General, E/CN.7/119, 4 May 1981.

(7) Mostly in petroleum resources (Algeria, Colombia, Indonesia, Iran, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, UAE, Venezuela) but also non fuel mineral resources, such as iron ore (Gabon, Mauritania, Venezuela), iron and steel (Liberia), copper (Zambia, Papua New Guinea, Indonesia), bauxite (Jamaica), aluminium (Ghana), gold (Ghana) and diamonds (Sierra Leone, Ghana); see further *Permanent Sovereignty over Natural Resources*, Report prepared by the Secretary General, E/CN.7/1983/5, 7 April 1983. The multiplication of commodity groupings or agreements in the 1970s also reflects the tendency of developing States to be more assertive with respect to their sovereignty over their natural resources, against what was increasingly perceived as the 'looting' of their natural resources by foreign companies, and gain control over the extraction and marketing of their resources; see Smith & Wells, 'Mineral Agreements in Developing Countries: Structures & Substance', 69 *AJIL* (1975), 560.

(8) Dolzer, 'Permanent Sovereignty over Natural Resources and Economic Decolonization', 7 *HRLJ* (1986), 217.

as the major factor perpetuating economic subservience, hampering economic development, and preventing full satisfaction of the needs of indigenous populations. Hence for instance, as early as 1938, Mexico took a number of measures of nationalisation of the means of production, which include the establishment of a state oil monopoly, on the basis of the 1917 Mexican Constitutional Art. 27, expressly providing for the nationalisation of property as a means to fulfil social needs⁽⁹⁾. In Iran, the nationalisation of the Anglo-Iranian Oil Company in 1951, was justified as a measure necessary, *inter alia*, to meet the needs of impoverished Iranian peoples⁽¹⁰⁾. Such indiscriminate measures of nationalisation were widely challenged and are the object of abundant case-law, known en *en bloc* as the nationalisation cases⁽¹¹⁾.

Dating back to colonial time, the terms of these concessional arrangements were

⁽⁹⁾See Rosenberg, *Le Principe de la Souveraineté des États sur leurs ressources naturelles*, 80 *et sequ.* Also Bullington, 'Problems of International Law in the Mexican Constitution of 1917', 21 *AJIL* (1927), 685.

⁽¹⁰⁾ See Iran's preliminary observations the case of *Anglo-Iranian Oil Co. case (Jurisdiction)*, *Judgment of July 22nd, 1952: ICJ Rep. 1952*, 93, at 306. Egypt (1956), and Indonesia (1957) were soon to embrace the pace, and the phenomenon appeared to generalise in the 1960s and 1970s, with large-scale nationalisation of mineral extraction facilities in Iraq, Ceylon and Cuba (1961), Peru (1968), Bolivia and Zambia (1969), Chile (1970), Libya and Algeria (1971), Saudi Arabia and Mauritania (1972), and Kuwait (1973); some oil assets were also expropriated during the Iranian Islamic Revolution (1979). See generally Burton & Inoue, 'Expropriations of Foreign-Owned Firms in Developing Countries: A Cross National Analysis', 18 *JWTL* (1984) 396.

⁽¹¹⁾ On the nationalisation in Libya, see for instance *BP Exploration Co (Libya) Ltd v. Astro Protector Compania Naviera SA, Sincat, & National Oil Corp.* *LAR* (1973), 77 *ILR*, 543; *BP Exploration Co (Libya) Ltd v. Government of Libyan Arab Republic* (1973 and 1974) (*BP case*), 53 *ILR*, 297; *Texaco Overseas Petroleum Co & California Asiatic Oil Co v. Montedison, Libyan National Oil Corp. & Viltanelle Etablissement* (1976), 77 *ILR*, 584; *Libyan American Oil Co v. Government of Libyan Arab Republic* (1977) (*Liamco case*), 62 *ILR*, 140; *Texaco Overseas Petroleum Co & California Asiatic Oil Co v. Government of Libyan Arab Republic* (1975 and 1977) (*Topco case*), 17 *ILM* (1978), 1; on which see Lalive, 'Contrats entre états ou entreprises étatiques et personnes privées. Développements récents', 181 *RdC* (1983-III), 9, at 83 *et sequ.*; and more generally Lipstein, 'International Arbitration Between Individuals and Governments and the Conflict of Laws', in Cheng & Brown, *Contemporary Problems of International Law: Essays in Honour of Georg Schwarzenberg on his eightieth Birthday* (Stevens & Sons, 1988), 177; see also Rigaux's strong critique, 'Des Dieux et des Héros: Reflexions sur une sentence arbitrale', 67 *Revue Critique de Droit International Privé* (1978), 16. Cases related to nationalisation in Cuba: *Banco Nacional de Cuba v. Sabbatino et al.*, (1964) 376 US 398; on which see Julliard, 'L'affaire Banco Nacional de Cuba c/ Sabbatino', 11 *AFDI* (1965), 205; in former Congo: *AGIP Co v. Popular Republic of the Congo* (1979), 21 *ILM* (1982), 726; *Benvenuti & Bonfant v. Popular Republic of the Congo* (1980), *ibid.*, 740; in Iran: *Oil Field of Texas Inc. v. The Government of the Islamic Republic of Iran, National Iranian Oil Co* (1986), Iran-US Claims Tribunal, Chamber 1, reproduced in 21 *JWTL* (1987), 107; in Kuwait: *Government of the State of Kuwait v. American Independent Oil Co (Aminoil)* (1982), 21 *ILM* (1982), 976; on which see Redfern, 'The Arbitration Between the Government of Kuwait and Aminoil', 55 *British YbIL* (1984), 65; also Lalive, *supra*, at 147 *et sequ.* and Lipstein, *ibid. supra*. See also cases related to nationalisation of copper industry in Chile: *Sociedad Minera el Teniente SA v. Norddeutsche Affinerie AG* (1973), 73 *ILR* (1987), 230; *Anaconda Co v. Overseas Private Investment Corp.* (1975), 59 *ILR*, 406. Extensive references to doctrine and case-law on nationalisation in general, and of mineral resources in particular in *Oppenheim's International Law*, Vol. 1, § 407.

biased in favour of the concessionaires, essentially transnational corporations from former colonial powers or other powerful States. In the 19th Century, they were justified under the principle of commercial freedom, as an absolute right grounded in the common necessity of mankind. Girault summarised perfectly well the opinion of the doctrine at the time as he wrote: «C'est, en effet, un droit naturel et supérieur pour tous les hommes que celui de se procurer par le travail et par l'échange des produits de toute nature qui se rencontrent à la surface du globe. Certaines peuplades par exemple ne peuvent empêcher d'utiliser les ressources de leurs sols et sous-sols»⁽¹²⁾. In other words, the necessity of the survival of mankind as well as the incompetence of indigenous populations to exploit efficiently their natural resources would legitimise the colonial powers to exploit the natural resources of their colonies, for no nation is vested with an exclusive prerogative over the natural resources it hosts. A major proponent of the doctrine of the freedom of commerce, Scelle concluded that «[u]n tel droit [des populations indigènes à se gouverner comme elles l'entendent et à résister à toute intervention extérieure] n'existe, nous le savons, au profit d'aucun groupement humain, nulle collectivité n'ayant le droit de s'isoler du commerce international»⁽¹³⁾.

The principle of commercial freedom for the survival of mankind was challenged under the principle of sovereignty over natural resources and preservation of natural resources for the survival of indigenous populations⁽¹⁴⁾. The case for sovereignty over natural resources was therefore primarily one of sovereignty over mineral resources, and the final claim one of discretionary nationalisation of (foreign) private interests and investments. In this respect, it reversed the classic doctrine of acquired rights⁽¹⁵⁾ and the

(12)A. Girault, *Principes de colonisation et de législation coloniale. Les colonies françaises avant et depuis 1815*, 6th edn. (L.Larose, Paris, 1943), 23-24, quoted after Rosenberg, *Le principe de la souveraineté des États sur leurs ressources naturelles*, at 44. .

(13)*Précis du Droit des Gens*, Tome I, *Introduction, Le Milieu Intersocial* (Sirey, 1932), at 142.

(14) In a context other than decolonisation, such argument was *inter alia* invoked by Norway to substantiate its claim of an exclusive right over fisheries off its coasts; *Fisheries case, Judgment of December 18th, 1951: ICJ Rep. 1951*, 116, at Paras. 55 *et sequ.*; see also Prof. Bourquin, *Fisheries case, ICJ Pleadings 1951*, Vol. IV, at 178-179. The argument found some sympathy with the Court (see Part V, for the criteria), but was strongly criticised by Judge Alvarez (*sep.op.*) and Lord McNair (*diss.op.*), *ICJ Rep. 1951*, 153, and 158 *et sequ.* It is extremely interesting to note that 1992 Agenda 21 explicitly acknowledges that the 'right to subsistence' of local communities and indigenous people has to be duly considered and respected in the negotiation and implementation of international agreements on the development or conservation of marine living resources; Para. 17.83.

(15)The doctrine of acquired rights makes it unlawful for a State to interfere with foreign-owned property, *inter alia* resorting to nationalisation or expropriation, *inter alia* without prompt and effective compensation, and engages state responsibility in application of the general rules of state responsibility for unlawful acts; *Case Concerning the Factory at Chorzów (Claim for Indemnity) (Jurisdiction)*, *PCIJ Ser. A-No 9*, September 7th, 1927, at 27-28. See further Kaeckenbeeck, 'La Protection Internationale des Droits Acquis', 59 *RdC* (1937-D), 321; *Oppenheim's International Law*, Vol. 1, § 407; Jimenez de Arechaga, 'Application of the Rules of State Responsibility to the Nationalization of Foreign-Owned' (*continued*)

inviolability of the basic and fundamental property right invoked by capital-exporting States to preserve their exploitation activities in 'non civilised nations' from the wave of nationalisation⁽¹⁶⁾.

The applicability of the doctrine of acquired rights to situations of decolonisation was denied by the International Law Commission, as antithetical to the very affirmation of inalienable and permanent right of peoples to dispose of their natural resources⁽¹⁷⁾. More generally, the preservation of acquired rights in the case of succession of States has never been endorsed as a general principle of international law. On the contrary, 1978 Vienna Convention on the Succession of States in Respect of Treaties provides:

«Nothing in the present Convention shall affect the principles of international law affirming the permanent sovereignty of every people and every State over its natural wealth and resources.»⁽¹⁸⁾

The Right of Sovereign Countries to Nationalize and Freely Exploit their Natural Resources was put as an item on UN Agenda in 1953⁽¹⁹⁾, after Uruguay had tabled a draft resolution, recommending States to respect «the right of each country to nationalize and freely exploit their natural wealth, as an essential factor of economic independence»⁽²⁰⁾. While States were finally unanimous in embracing the principle of

Property', in Hossain (ed.), *Legal Aspects of the New International Economic Order* (Frances Pinter/Nichols Publishing Company, 1980), Chap. 17.

⁽¹⁶⁾ Rosenberg, *Le principe de la souveraineté des États sur leurs ressources naturelles*, at 50 et sequ.

⁽¹⁷⁾ UNGA, Report of the International Law Commission on its 21st Session, A/7610, 21 September 1969. At the 21st session of the ILC, Bedjaoui, at the time special rapporteur on the succession of States and Governments, emphatically declared that «the fundamental incompatibility between decolonization and acquired rights derives from the fact that the successor State is confronted with a choice over which it cannot possibly hesitate, between the *possible* equality which requires it to respect private rights and the *real* necessity which forces it to consider the public interest.»; 1969 *YbILC* Vol. II, 69, at Para. 108 (emphasis as in original).

⁽¹⁸⁾ Art. 13; see further *Quoc Dinh: Droit International Public*, § 358. The authors underlined that, with the emergence of new States, the doctrine of acquired rights has lost its customary character dating back from the time of a 'European' international community, and no longer benefits from a sufficient *opinio juris* to be universally opposable.

⁽¹⁹⁾ Since the late 1970s, the issue has been treated under the general heading *The Use of Development of Natural (Non Agricultural) Resources*.

⁽²⁰⁾ The Uruguayan draft is partly reproduced in Mughraby, *Permanent Sovereignty over Oil Resources*. The way had already been partly paved by a resolution pushed through the UN General Assembly by Poland, and unanimously passed, albeit with some modifications. The resolution recognised that underdeveloped countries have «the right to determine freely the use of their natural resources and that they must utilise such resources in order to be in a better position to further the realisation of their plans of economic development in accordance with their national interests, and to further the expansion of the world economy»; UNGA, A/Res./523 (VI), 12 January 1952, on Integrated Economic Development and Commercial Agreements, preambular Para. 1. Yet, contrary to the Uruguayan draft, the Polish initiative was essentially designed to invite developing States to enter into long term economic agreements with less developed States. The reference to the world economy was inserted after a US initiative. For a thorough review of the debates on permanent sovereignty over natural resources at the UN up to the mid
(continued)

permanent sovereignty over national resources, and its correlative right to nationalise⁽²¹⁾, a serious controversy arose over the exercise of those prerogatives, and the limits thereto.

Industrial countries, at the time indirectly affected by the dispute over the nationalisation of the Anglo-Iranian Oil Company, were anxious to preserve their vested interests and to assure a stable climate favourable to future commercial transactions without being haunted with the fear of unpredictable and arbitrary measures of expropriation or nationalisation. No opportunity was missed to resort to some sort of 'chantage aux investissements'⁽²²⁾, and stress the importance of the security of economic transactions for the sake of developing countries themselves in their battle for economic development, as a necessary premise to foreign investments and associated inflow of foreign currency. Industrialised States thus insisted on the qualification of sovereign prerogatives, with express reference to a duty to respect, in good faith, the commitments assumed (a) under contractual relations, (towards private companies) and (b) under international law in general (towards other States)⁽²³⁾. A US delegate declared at the 7th Session of UN General Assembly:

«...[N]o one questions the power of countries to control and to use their natural wealth and resources as they see fit, provided that they respect their obligations under contract and under international law.»⁽²⁴⁾

Any reference to contractual commitments was objected to by developing States, on the ground that the terms of concessionary arrangements did not result from fair negotiations, but had been unilaterally decided and imposed by concessionaires, taking advantage of both their dominant position as the sole owner of financial resources and technologies, and of the vulnerability of the host States, in need of foreign investment⁽²⁵⁾. Likewise, any reference to international law, more particularly to the 'general principles of international law as recognised by civilised nations', was fiercely

1970s: Elian, *The Principle of Permanent Sovereignty over Natural Resources*, Chap. 4; Rajan, *Sovereignty over Natural Resource*, Chap. 2 and 6.

(21) On this aspect of the question, see further Mughraby, *Permanent Sovereignty over Oil Resources*, 17; Rajan, *Sovereignty over Natural Resource*, 15.

(22) Rosenberg, *Le Principe de souveraineté des États sur leurs ressources naturelles*, 107.

(23) Generally on the position of industrialised countries towards the assertion of permanent sovereignty over natural resources and the right to nationalise: Rajan, *Sovereignty over Natural Resource*, Chap. 4.

(24) Quoted after Rajan, *Sovereignty over Natural Resource*, at 87.

(25) In response to US insistence on the fact that those agreements had been freely entered into and had therefore to be honoured, a Nigerian delegate ironically pointed out that those were like 'free' agreement between a lion and a rabbit; reported in Rajan, *Sovereignty over Natural Resource*, 72; also Rosenberg, *Le Principe de souveraineté des États sur leurs ressources naturelles*, 181 *et sequ.*

resisted by most developing States, on the ground that this law, in its present state, was a pure European product not representative of the interests of the 'new' States⁽²⁶⁾; they also argued that any reference to international obligations required from States to surrender some of their essential sovereign prerogatives⁽²⁷⁾.

Hence, the debate took place essentially on a North-South basis or more exactly between an 'elite' of developing States⁽²⁸⁾, and occidental capitalist States, although States from the communist bloc tried to inject an ideological dimension to the principle of permanent sovereignty over natural resources and associated right to nationalise, and pressurised developing countries into nationalisation as a means of promoting self-reliance and appropriation of all means of production, and suppressing all forms of 'capitalist' interference. Developing States however, ostensibly distanced themselves from the positions of the communist bloc, and denied acting on ideological grounds⁽²⁹⁾.

(26) Algeria and Greece both insisted on the need to adopt international law «which has always been prepared against us, in spite of us»; as quoted in Rajan, *Sovereignty over Natural Resource*, at 81-82. Reference to international law was equally criticised by the Soviet Union, as an attempt to impose capitalist and bourgeois principles upon the whole international community; see Tunkin, *Le droit international public: problèmes théoriques* (Pédone, 1965), 125.

(27) Generally on the position of developing countries with respect to an 'international' recognition of permanent sovereignty over natural resources and related nationalisation prerogatives: Rajan, *Sovereignty over Natural Resources*, 72; Cuba resisted any reference to any international law, «because the sovereign rights to dispose of [one's] wealth and natural resources cannot be subject to any limitation; otherwise, it would cease to be a sovereign right»; as quoted in Rajan, *ibid.*, at 72-73. Mexico had taken an even more radical stance, and denied its support to all proposals embodying the principle of permanent sovereignty over natural resources and related right to nationalise, on the ground that «...any such proposal would seem to cast doubt on the validity of a right, the exercise of which [is] one of the clearest manifestations of national sovereignty»; Saudi Arabia considered such international recognition would be equivalent to «...the United Nations asking governments to recognize their right to act as governments»; as quoted in Rajan, *ibid.*, at 82-83; Chile stressed the paradox of referring to international law where attempts are made to 're-nationalise' and strengthen state sovereignty over their natural resources; Rajan, *ibid.*, at 73.

(28) Some of the non oil-rich countries in Africa, Caribbean and Pacific on the other hand, became bound to their former colonial Powers through the Lomé process. The EEC-ACP special relationship arose from the recognition of collective responsibility of EEC founding members (Germany, France, Italy and Benelux). Initiated with the successive Yaoundé (1965) and Arusha (1970) Conventions, the process of close co-operation has been perpetuated through the successive Lomé Conventions, to further the development of the ACP; 1975 ACP-EEC Lomé I; 1980 ACP-EEC Lomé II, 1985 ACP-EEC Lomé IV; 1989 ACP-EEC Lomé IV). The major emphasis of these conventions is essentially on co-operation, whilst no attempt is made to integrate the ACP in the common market. For some, the Lomé process purports to preserve reliable sources of raw material for European States; Elian, *The Principle of Permanent Sovereignty over Natural Resources*, Chap. 2, at 51 *et sequ.* No reference is made to permanent sovereignty over natural resources in 1975 ACP-EEC Lomé I; 1989 ACP-EEC Lomé IV expressly reserves «the right of each State to determine its own political, social, cultural and economic policy options», and the right of ACP States «to determine the development principles, strategies and models for their economies and societies in all sovereignty»; (Arts. 2 and 3).

(29) Throughout the debate on sovereignty over natural resources, developing States adopted a strategy of non-alignment, and refused to take side in the East-West ideological conflicts paralysing the United Nations; even Mexico, which had just passed a constitution inspired by socialist ideals, providing, *inter alia*, for the nationalisation of all means of production without guarantee of indemnification, refused to
(continued)

Uruguay for instance, pointed out that «...[t]he sovereign right of states to exploit what belongs to them should certainly not be confused with a manifestation of an aggressive and destructive ideology...»⁽³⁰⁾.

While any explicit reference to nationalisation was finally barred from the final text of Resolution 626 (VII)⁽³¹⁾ in a vain attempt to achieve a consensus on the text⁽³²⁾, a compromise in four points was finally reached between the two major negotiating groups of States⁽³³⁾:

favour one or another economic and political system; Verwey, *Economic Development, Peace and International Law*, (VanGorcum, 1972), 244.

The G77 had emerged out of the first UNCTAD, held in 1964, as a strategic association used by developing States to present a unified front against industrialised and socialist States on economic issues. Most States forming the G77 (now counting over 150 States) were also members of the Non-aligned Movement (now 113 States; Brazil, Chile and Venezuela among others, are members of the G77 but not of the NAM); consequently, the G77 has very often followed the line of the NAM on more political issues, and *inter alia* embraced a policy of non alignment.

The NAM was set up in the mid 1950s, and gathered newly independent States refusing to align with either of the superpowers «to their safeguard their national independence and the legitimate rights of their people»; Lusaka Declaration on Peace, Independence, Development, Cooperation, and Democratization of International Relations, issued by the Third Conference of Heads of State of Governments of the Non-Aligned Countries, 1970, 10 *ILM* (1971), 215; on NAM, see for instance Arnold, *The Third World Handbook*, 2nd edn (Cassell, 1994), Chap. 3; on the G77: Sauvant, *The Group of 77: Evolution, Structure, Organization* (Oceana, 1981); Soroos, *supra* n. 7, at 199 *et sequ.*

⁽³⁰⁾ As quoted in Rajan, *Sovereignty over Natural Resources*, 67; see also statement issued by Nigeria, Algeria, Brazil, and Chile, reported *ibid.*, 67-68.

⁽³¹⁾ UNGA, A/Res./626 (VII), 21 December 1952, on the Right to Exploit Freely Natural Wealth Resources, consecrates the principle of permanent sovereignty over natural resources in accordance with the purposes and principles of the United Nations Charter, and stresses the need for maintaining the flow of capital in conditions of security, mutual confidence and economic co-operation. The related prerogative of nationalisation underpins the declaration, as clearly illustrated by the US opposing vote, on the ground of absence of reference to the duty to protect private interests under international law in case of measures of nationalisation; Hyde, 'Permanent Sovereignty over Natural Wealth and Resources', 50 *AJIL* (1956), 854, at 859-860. On the debates leading to UNGA, A/Res./626 (VII), 21 December 1952, on the Right to Exploit Freely Natural Wealth Resources, see generally Hyde, *ibid.*; Mughraby, *Permanent Sovereignty over Oil Resources*, Chap. II (16 *et sequ.*); Rajan, *Sovereignty over Natural Resources*, 14 *et sequ.* Nevertheless, Resolution 626 (VII), 21 December 1952, came to be referred to as the nationalisation Resolution as a reflection of the focus of the debates leading to its adoption; Rosenberg, *Le Principe de souveraineté des États sur leurs ressources naturelles*, 107; Schrijver, 'Permanent Sovereignty over Natural Resources versus the Common Heritage of Mankind', in de Waart et al. (eds.), *International Law and Development* (Martinus Nijhoff, 1988), 87, at 88.

⁽³²⁾ The resolution was passed by 36 votes to 4 (New Zealand, South Africa, UK and US) with 20 abstentions (both from developing, socialist and free market States).

⁽³³⁾ Although UNGA, A/Res./523 (VI), 12 January 1952, on Integrated Economic Development and Commercial Agreements, originated in a Polish draft, the majority of the States from the socialist bloc abstained from voting in subsequent resolutions, including the 1962 landmark Resolution on Permanent Sovereignty over Natural Resources, where 9 socialist States abstained, alongside Cuba, Burma and Ghana.

- (1) every State is vested with a right of permanent sovereignty over its natural resources, understood as the ground and underground mineral resources within its territorial jurisdiction, including maritime zones under such jurisdiction;
- (2) every State is vested with the correlated prerogative to nationalise 'in order to safeguards its national resources'⁽³⁴⁾;
- (3) both prerogatives are to be exercised in the interest of peoples and their development, according to the general principles of international law (*inter alia* compensation)⁽³⁵⁾;
- (4) due consideration shall be paid to the necessity to maintain capital flows in conditions of security, mutual confidence, and economic co-operation.

This hard-won consensus was subsequently crystallised in the 1962 landmark Resolution on Permanent Sovereignty over Natural Resources⁽³⁶⁾ and endorsed again in subsequent resolutions⁽³⁷⁾; any subsequent attempt to modify it ended in failure.

ii. Sovereignty over Economic Assets and Policy in a New International Economic Order

The first major attempt to broaden the conception of permanent sovereignty over natural resources was triggered by less developed countries 'new' dilemma, generated in fact by their newly won sovereignty over their natural resources. On the one hand, mineral resources-rich developing countries were aware of the illusory nature of a

(34) A/Res./3171 (XXVIII), 17 December 1973, on Permanent Sovereignty over Natural Resources. The right to nationalise as a customary right was subsequently recognized in the nationalisation cases, quoted *supra*. See more particularly Topco case, *supra* n. 9, 17 *ILM* (1978), at 30.

(35) See *infra*, 4/ii./b. Limits Flowing from International Law. Exception is made however with respect to acquired rights before the realisation of complete sovereignty of countries formerly under colonial rules, for which no indemnification is required in case of measures of nationalisation; 1962 landmark Resolution on Permanent Sovereignty over Natural Resources, Preamble.

(36) Passed with 87 votes against 2 (France and South Africa) and 12 abstentions (the soviet bloc, Cuba, Ghana and Jamaica); the abstention *en bloc* of socialist States was triggered by the 'capitalist bias' of the Resolution, most notably the nationalisation and compensation clause. For a comprehensive review of the debates leading to the adoption of the resolution: Gess, 'Permanent Sovereignty over Natural Resources'; Schwebel, 'The Story of the UN's Declaration on Permanent Sovereignty over Natural Resources', 49 *American Bar Association Journal* (1963), 463. See also Banerjee, 'The Concept of Permanent Sovereignty over Natural Resources: An Analysis', 8 *Indian JIL* (1968), 515; Rosenberg, *Le Principe de souveraineté des États sur leurs ressources naturelles*, 149 *et sequ.*

(37) A/Res./2158 (XXI), 25 November 1966, on Permanent Sovereignty over Natural Resources, passed with 104 votes with no opposition, and 6 abstentions; A/Res./2386 (XXIII), 19 November 1968, on Permanent Sovereignty over Natural Resources; A/Res./2692 (XXV), 11 December 1970, on Permanent Sovereignty over Natural Resources of Developing Countries; A/Res./3016 (XXVII), 18 December 1972, on Permanent Sovereignty over Natural Resources of Developing Countries; A/Res./3037 (XXVII), 19 December 1972, on a Charter on Economic Rights and Duties of States; A/Res./3171 (XXVIII), 17 December 1973, on Permanent Sovereignty over Natural Resources; See also 1972 Stockholm Action Plan for Human Environment, Recommend. 51(a).

strategy of *Alleingang* in an inter-dependent world, and more particularly of their dependence on foreign investment and (technological and financial) assistance to optimise the exploitation of their own natural resources⁽³⁸⁾. On the other hand, those countries were not ready to surrender even part of their sovereign prerogatives to foreign corporations for the sake of economic development. Banking on the dependence of developed States on raw materials, they sought to use the 'weapon of natural wealth' to force those States into concessions⁽³⁹⁾.

The claim of 'economic self determination' became increasingly associated with the plea of sovereign equality⁽⁴⁰⁾ to reconcile both imperatives of sovereignty and co-operation, and to substantiate claims for equal opportunities and fair trade relations in a new international economic order⁽⁴¹⁾:

«Au nom d'une égalité souveraine qu'ils veulent plus réelle, les nouveaux États vont revendiquer un développement auquel ils estiment avoir droit. Le principe de l'égalité des États va alors trouver une nouvelle vocation⁽⁴²⁾ (...) C'est au nom de cette souveraineté [que les États vont] réclamer la cessation d'une inégalité de développement aliénante. *La souveraineté n'est plus un instrument de défense passive; elle devient une opération-vérité au nom de laquelle on réclame l'égalité à laquelle tout État a droit c'est-à-dire l'égalité de développement, l'égalité de niveau de vie.*»⁽⁴³⁾

Developing States strove to extend the material object of their permanent sovereignty claim beyond mineral resources, to encompass the whole national economic machinery, on the ground that, for the purpose of an emancipating development, countries must «undertake themselves the exploitation and marketing of their natural resources...»⁽⁴⁴⁾.

(38) Even China, partisan of self-reliance and self-exploitation, recognised the need for 'sincere and effective external assistance or economic and technical exchanges; Rajan, *Sovereignty over Natural Resources*, 82 *et sequ.*

(39) Flory, 'Inégalité économique et évolution du droit international', in Société Française pour le Droit International, *Pays en voie de développement et transformation du droit international* Colloque d'Aix-en-Provence (Pédone, 1974), 11.

(40) Virally prefers the terms of 'inégalité compensatrice', as implying a certain duty of solidarity from the part of developed States to the benefit of developing countries, to progressively achieve factual equality; 'La Charte des droits et devoirs économiques des États: Notes de lecture', 20 *AFDI* (1974), 57, at 72; and Virally, 'Panorama du Droit International Contemporain, Cours Général de Droit International', 183 *RdC* (1983-III), 9, at 324 *et sequ.*

(41) For a sample of references on early literature on a new international economic order, see Saxena, 'Selected Bibliography on the New International Economic Order, 1960-1978', 20 *Indian JIL* (1980), 125.

(42) Thus far, small States had relied on sovereign equality essentially to protect themselves against intervention from great powers (duty of abstention/non interference).

(43) Flory, *supra* n. 39, at 33-34 (emphasis added).

(44) A/Res./2158 (XXI), 25 November 1966, on Permanent Sovereignty over Natural Resources, Para. 6; (continued)

Developing countries made it clear however, that they were not opposed to all forms of co-operation or the flowing in of foreign capital; Iran for instance, expressed its willingness to attract foreign capital, but on a fair contractual basis, and provided that the foreign capital 'would not try to obtain privileges contrary to the interests of Iran'⁽⁴⁵⁾. Regardless of the opposition of developed States, developing States went even further and deduced extremely bold implications from permanent sovereignty and sovereign equality, ranging from the right to receive financial and technological assistance to exploit domestic mineral resources, and a right to a share in the exploitation of common resources, to the right to fair access to, and equal opportunities in the world economic order.

Developing States thus turned themselves into the advocates of a 'progressive' vision of international law, as a dynamic codification of norms of *co-operation*⁽⁴⁶⁾, and pressed for a greater regulation of co-operation and economic relations to build-up and promote a new social and economic order. The main outcome was the adoption of the 1975 Economic Charter⁽⁴⁷⁾, which provides at its first article that «[e]very State has the sovereign and inalienable right to choose its economic system...»⁽⁴⁸⁾. The next article

see also 1974 NIEO Declaration, operational Para. 4(e) and (h); Solemn Declaration of the Sovereigns & Heads of State of the OPEC, issued at the first top-level Conference of OPEC (Algiers, 5-6 March 1975), reproduced in 14 *ILM* (1975), 566; Action Programme and Declarations issued by the first Conference of Developing Countries on Raw Material (Dakar, 3-8 February 1975), reproduced in 14 *ILM* (1975), 520 (for instance Action Programme Paras. 1 & 3, and Resolution 1.

(45) As reported in Rajan, *Sovereignty over Natural Resources*, 54 (emphasis added). It was not until 1985 ACP-EEC Lomé III that developing States finally committed themselves to create and maintain stable investment conditions; see Arts. 24'-247.

(46) Developing States had already expressed their disapproval of the classic conception of international rules as static rules of *coexistence*, which they consider wholly inappropriate to serve their own needs and interests, and called for a more progressive approach to international law during the discussions on the reference to international law in the compromise statement of permanent sovereignty over natural resources, *supra*; see also De Waart, 'Permanent Sovereignty over Natural Resources as a Cornerstone for International Economic Rights and Duties', 14 *Netherlands ILJ* (1977), 304.

(47) Castañeda, 'La Charte des droits et devoirs économiques des États', 20 *AFDI* (1974), 31, 35 *et sequ.*; Virally, 'La Charte des droits et devoirs économiques des États: Notes de lecture', 20 *AFDI* (1974), 57, 62 *et sequ.* See Verloren van Themaat, *The Changing Structure of International Economic Law* (Martinus Nijhoff, 1981), Chap. IV.

(48) Very similar wording is used in the Lima Declaration and Plan of Action on Industrial Development and Cooperation, adopted at UNIDO Second General Conference, Lima, 1975. Lima Declaration, Para. 32 reads:

[E]very State has the inalienable right to exercise freely its sovereignty and permanent control over its natural resources, both terrestrial and marine, and over all economic activity for the exploitation of these resources in the manner appropriate to its circumstances, including nationalization in accordance with its laws as an expression of this right, and that no State shall be subjected to any forms of economic, political or other coercion which impedes the full and free exercise of that inalienable right;

(continued)

reiterates the principle of permanent sovereignty over natural resources and economic activities as entailing the right to regulate and supervise foreign investments as well as the activities of transnational corporations, and the right to nationalise and expropriate foreign property⁽⁴⁹⁾.

The Third United Nations Conference on the Law of the Sea (1973-1982), served as a battleground for developing States to promote and develop their ideal of a new international economic order⁽⁵⁰⁾ and realise a new international marine order⁽⁵¹⁾. The result was the declaration of the exploitation of the deep sea-bed and ocean floor and subsoil thereof beyond the limits of national jurisdiction (the Area), the common heritage of mankind⁽⁵²⁾, to be exploited for the common interest and benefit of mankind⁽⁵³⁾; «sharing in the common heritage of mankind was to replace the humiliating

Lima Declaration and Plan of Action are reproduced in 14 *ILM* (1975), 826; it was adopted by a vote of 82 to 1 (US) with 7 abstentions (Belgium, Canada, FRG, Israel, Italy, Japan, and UK).

(49) It is illustrative to note that no mention of sovereignty over natural resources is made in the resolutions launching the first development decade (1961); instead, UNGA, A/Res/1710(XVI) 19 December 1961, confines itself to urging States «to pursue policies designed to ensure to the developing countries an equitable share of earnings from the extraction and marketing of their natural resources by foreign capital» (Para. 2(b)); the strategy was still much Western dominated, as the future G77 was not yet powerful enough to lobby against or push in UNGA resolutions. No mention was made either to the finiteness of natural resources, the main preoccupation being economic growth and social development. Both the 1970 Strategy for the Second Development Decade and 1980 Strategy for the Third Development Decade contain a provision on permanent sovereignty over natural resources (respectively Arts. 74 and 126(b)); no express reference is made however to a correlated right of nationalisation, and no reference either is made to the duty to exercise the permanent sovereignty according to objectives and principles of international law. Presumably because of the lack of express reference to international law, the USA entered a reservation on the causes that might justify the suspension thereof; see Virally, 'La Deuxième Décennie des Nations Unies pour le Développement', 16 *AFDI* (1970), 9. Consequently, as a result of a compromise over the acceptability of the whole decade, the 1990 Strategy for the Fourth Development Decade abstained from any reference to permanent sovereignty over natural resources and related right to nationalise, and to new international economic order; see Flory, 'La Quatrième Décennie pour le Développement; la Fin du nouvel ordre économique international?' 36 *AFDI* (1990), 606.

(50) For a review of the position of Latin American and African States at the Third Conference on the Law of the Sea: Adede, 'The Group of 77 and the Establishment of the International Sea-Bed Authority', 7 *ODIL* (1979), 31; Friedman, & Williams, 'The Group of 77 at the United Nations: an Emergent Force in the Law of the Sea', 16 *San Diego LR* (1979), 555; Galindo Pohl, 'Latin America's Influence and Role in the Third Conference on the Law of the Sea', 7 *ODIL* (1979), 65; Simoes Ferreira, 'The Role of African States in the Development of the Law of the Sea of the Third UN Conference', 7 *ODIL* (1979), 89.

(51) 1982 UNCLOS Preamble refers to a 'just and equitable economic order'; Para. 5; [t]he actions of the developing countries have been influenced by thought that the model created in an ISA should be the first such model in a NIEO»; Grolin, 'The Deep Seabed: A North-South Perspective', in Laursen (ed.), *Towards a New International Marine Order*, Nijhoff, 1982), Chap. 9, at 125.

(52) See 1982 UNCLOS Art. 136.

(53) 1982 UNCLOS Art. 140; the clearest expression of a new international marine order is contained at Art. 150.

concept of foreign aid»⁽⁵⁴⁾. In its original version, the regime applied to the Area entailed a planned and partly centralised exploitation for the common benefit of mankind, and a regulated co-operation⁽⁵⁵⁾.

On the other hand, developed States regarded the extension of permanent sovereignty to all economic activities with extreme suspicion, as a sign of controlled/interventionist economic policy (and a source of danger for their own vested interests), and hence consistently opposed it. Instead, developed States insisted on the responsibility of developing States to create a favourable environment to induce co-operation and attract foreign investments. They failed however, in their suggestion to amend the 1975 Economic Charter, Article 2 and confine the concept of sovereignty over natural resources to natural wealth and resources⁽⁵⁶⁾. Nevertheless, their persistent objection to the extension of sovereignty to any sort of economic activities has definitely hampered the achievement of a real *opinio juris communis* thereupon⁽⁵⁷⁾.

In a similar way, developed States admitted in principle that certain areas constitute part of common heritage of mankind to be exploited in the interests of mankind, but fiercely contested any claim to a fair share of the benefit obtained from the exploitation of these common areas, or to a free access to the technologies developed for such to

(54) Mann-Borgese, 'The New International Economic Order and the Law of the Sea', 14 *San Diego LR* (1977), 584, at 590. More generally of the 'trade versus aid' revendication, see Middleton *et al.*, *Tears of the Crocodile, From Rio to Reality in the Developing World* (East African Educational Publisher, 1993), Chap. 5.

(55) For more detailed considerations on the meaning and general implications of the concept of common heritage of mankind, see *infra*, Chap. 5/2, Partnership in National and International Law. On the expression of the new international economic order in the context of the law of the sea negotiations, see for instance: Boczek, 'Ideology and the Law of the Sea: The Challenge of the New International Economic Order', 7 *Boston College ICLR* (1984), 1; Mann-Borgese, 'The New International Economic Order and the Law of the Sea', 14 *San Diego LR* (1977), 584; Goldwin, 'Le droit de la mer: sens commun contre «patrimoine commun»', 89 *RGDIP* (1985), 719; Hossain (ed.), *Legal Aspects of the New International Economic Order* (Frances Pinter/Nichols Publishing Company, 1980), Part III; Imnadze, 'Common Heritage of Mankind: A Concept of Co-operation in Our Interdependent World?', Kuribayshi & Miles (eds.), *The Law of the Sea in the 1990s: A Framework for Further International Cooperation* (The Law of the Sea Institute, University of Hawaii, 1992), 312; Juda, 'UNCLOS III and the New International Economic Order', 7 *ODIL* (1979), 221; Mahmoudi, *The law of Deep-Sea Bed Mining* (Almqvist & Wiksell International, 1987), Chap. 4; Mann-Borgese, 'The New International Economic Order and the Law of the Sea', 14 *San Diego LR* (1977), 584.

(56) Proposed Amendment to Article 2, reproduced in 14 *ILM* (1975), 262. See also De Waart, 'Permanent Sovereignty over Natural Resources as a Cornerstone for International Economic Rights and Duties', 14 *Netherlands ILJ* (1977), 304, at 311.

(57) A parallel examination of the 1962 landmark Resolution on Permanent Sovereignty over natural Resources and subsequent modification brought, *inter alia* by the 1975 Economic Charter was undertaken in *Topco* case, *supra* n. 9, lead the Arbitral Tribunal to conclude (although more in the context of nationalisation) that clear lack of consensus on the alteration of the compromise reached in the former resolution implied that the 1975 Economic Charter Art. 2 had to be analysed as a political rather than as a legal declaration *contra legem* for developed States; 58 *ILR*, 389, at Para. 88.

exploitation. The 're-evaluation (in the sense of de-regulation) of some aspects of the regime for the Area and its resources', introduced by the 1994 UNCLOS Agreement Relating to the Implementation of Part XI⁽⁵⁸⁾, was presented as necessary due to «political and economic changes, including in particular a growing reliance on market principles...»⁽⁵⁹⁾.

iii. Sovereignty over Environmental Resources and Environmental Policies versus Globalisation of Environmental Standards and Policies

Recent years have witnessed substantial changes in States' attitude towards sovereignty over natural resources. In the same way as developing countries had previously used the concept of *common heritage of mankind* to justify the intrusion of national and international law in the exploitation of certain (mineral) resources located both within and outside state jurisdiction, developed States⁽⁶⁰⁾ availed themselves of the *common interest /concern of mankind*⁽⁶¹⁾ to justify the intrusion in the management and protection of certain natural resources under and outside other state jurisdictions⁽⁶²⁾. It is thereby suggested that «[s]ome parts of the World's heritage are so unique and important to the world as a whole, that their conservation and protection is not only a problem for individual nations, but for the international community as well»⁽⁶³⁾.

(58) The Resolution endorsing the Agreement was unanimously passed with 121 votes in favour, seven countries abstained, mostly Latin American States (Colombia, Nicaragua, Panama, Peru and Venezuela), and also Thailand, and the Russian Federation. On the changes brought by the 1994 Agreement, see *infra*, Chap. 5/2/iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership.

(59) UNGA, A/Res./48/263, 17 August 1994, Para. 6.

(60) For the purpose of comparison only, the present section adopts the same classification of 'States groups' as the previous section, although it is clear to the author that these groups are far from being homogenous with respect to the 'commonalisation' of environmental regulation, as illustrated by the strong divergence between US and EC on the issue of extra territoriality of national environmental laws. Intra-grouping differences shall be mentioned when particularly significant.

(61) On the implications and difference between the expressions of common heritage, concern and common interest of mankind, *infra* Chap. 5/2/iv. Common Concern, Common Interest of Mankind: Global Partnership or Global Bargain?

(62) This chapter focuses upon International rules applying to resources under domestic jurisdiction exclusively; the regulation of international commons (beyond state jurisdiction) raises as such no particular issue under the principle of sovereignty over natural resources, and will be dealt with essentially *infra* in Chap. 5, Principle of Partnership. See also Birnie & Boyle, at 112; Boyle, 'International Law and the Protection of the Global Atmosphere', in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman / Martinus Nijhoff, 1991), Chap. 1; Hahn & Richards, 'The Internationalization of Environmental Regulation', 30 *Harvard ILJ* (1989), 421.

(63) Bilderbeck (ed.), *Biodiversity and International Law* (IOS, 1992), at 86. The 1971 Ramsar Convention and 1972 World Heritage Convention stand among the earliest documents to express the necessity of an international protection of domestic natural resources, part of which are «of outstanding interest and therefore need to be preserved as part of the world heritage of mankind as a whole»
(continued)

In that context, one should perhaps specify that a genuine 'droit d'ingérence écologique' or eco(logic) intervention, as a modified form of humanitarian intervention, has not yet gone beyond the stage of pure hypothesis *de lege ferenda*, and endorsed by a limited number of authors⁽⁶⁴⁾. Some scholars, in the light of the financial and/or technological incapacity of certain States to address domestic environmental problems, propose a genuine right of external intervention, decided by the international community, and imposed, where necessary by force, upon given States. Such intervention would be strictly limited to extreme cases «lorsque le danger est suffisamment grave par rapport aux moyens dont [l'État en crise] dispose pour gérer le risque en évitant sa réalisation, ou en assurant lui-même la remise en état lorsque la catastrophe s'est produite»⁽⁶⁵⁾; it would therefore constitute a «solution to the management of economically and ecologically sensitive areas whose mismanagement is likely to threaten international peace and security»⁽⁶⁶⁾.

On the contrary to the controversial *ingérence humanitaire*, involving often subjective and partial assessments of often disguised human rights violations, the *ingérence écologique* would follow objective and more easily verifiable criteria; indeed,

(preambular Para. 6; see also 1971 Ramsar, preambular Paras 2 & 3, and Art. 2(1) & 2(6)). In the case of the 1972 World Heritage Convention, however, it had a very limited impact most particularly with respect to environmental resources, due to the fact that (1) it only applies to listed cultural and natural sites located on the territories of High Contracting Parties; (2) procedures of nominations and listing are extremely burdensome; and (3) such procedures have to be engaged by hosting State itself, which means precisely that the State retains the power to decide to alienate its own sovereignty over a particular resources. A particularly enlightening perspective of the inherent weaknesses of the convention, albeit not an authoritative international interpretation thereof, was provided the oft quoted decision of the Australian High Court in *Tasmanian Dam* case (1983).

In a dispute opposing the Commonwealth and Tasmania over the construction of a dam in a natural park considered to be part of the world heritage Australian High Court held that, although the 1972 World Heritage Convention imposes on States Parties 'certain obligations', *inter alia* to help in the identification, protection, conservation and preservation of the listed heritage (Art. 6(2)), it specifies no obligation on the host State to take any concrete action to protect the natural heritage from possible or actual damage; *Commonwealth v. Tasmania*, [1984-85] 154 Commonwealth Law Reports, 1, at 88 *et sequ.* Generally on the contribution of the 1972 World Heritage Convention to environmental protection, see Birnie & Boyle, 59-60, 458 and 468 *et sequ.*; Caldwell, *International Environmental Policy*, 90 *et sequ.*; Lyster, *International Wildlife Law* (Grotius, 1985), Chap. 11. For a comment on the 1971 Ramsar Convention, see Bowman, 'The Ramsar Convention comes of Age', 42 *Netherlands ILR* (1995), 1; Lyster, *op.cit.*, Chap. 10.

(64) The concept of *ingérence écologique*, like that of *ingérence humanitaire*, largely owes its development to French authors; see for instance Bachelet, *L'ingérence écologique* (Frison Roche, 1995); Cans, 'L'ingérence écologique', *Le Monde*, 28 November 1991, at 8.

(65) Bachelet, *supra* n. 64, at 41.

(66) Baslar, *The Concept of the Common Heritage of Mankind in International Law* (Kluwer Law International, 1998), Ph.D manuscript, at 181. See also Nettesheim, 'Die ökologische Intervention, Gewalt und Druck zum Schutz der Umwelt?', 34 *AVR* (1996), 168; Boisson de Chazournes, 'Variations juridiques sur le thème de l'ingérence écologique', in Sabelli (ed.), *Ecologie contre nature* (Presses Universitaires de France/Nouveaux cahiers de l'IUED, 1995), 53.

«[d]écélérer un risque écologique majeur (...) procède de moyens techniques (satellites d'observation) dont on ne trouve pas d'équivalent en matière de droits de l'Homme»⁽⁶⁷⁾.

The major difficulty with such theory is that it is essentially reactionary, and implies a clear identification of the author(s) and source(s) of the damage, none of which is necessarily straightforward in the case of environmental harm⁽⁶⁸⁾. In fact, such an approach might be appropriate as a temporary measure for emergencies and extreme cases like Chernobyl, Seveso, or the setting fire to the Kuwaiti oil wells, to mitigate an immediate threat/harm; it would then require a rapidity of reaction that can probably not be expected from the international community, as well as a degree of information on the causes, sources and importance of the risk/damage which the State at the origin of the risk/damage might not have, or might not want to communicate. The *ingérence écologique* would certainly be inappropriate for other long term environmental disasters, such as deforestation, ozone layer depletion, or loss of biodiversity, unless green helmets are permanently stationed round the globe⁽⁶⁹⁾.

Nevertheless, the idea of an international environmental task force⁽⁷⁰⁾, that would intervene in case of environmental emergencies, if necessary within national borders, clearly has been increasingly discussed as part of the on-going debate on global environmental security⁽⁷¹⁾, brought as an issue to the United Nations in 1988, as a result

(67) Bachelet, *supra* n. 64, at 30; for a comparison of 'ingérence humanitaire' and 'ingérence écologique', see more particularly Tamiotti, 'L'ingérence écologique: un concept', in Sabelli (ed.), *Ecologie contre nature* (Presses Universitaires de France/Nouveau cahiers de l'IUED, 1995), 159.

(68) See *infra* Chap. 3/3/iii, Causality Link Between the Object and the Harm/Risk.

(69) See Sand, 'UNCED and the Development of International Environmental Law', 3 *YbIEL* (1992), 3, at 9.

(70) On the various proposals for reform of the UN system to preserve security, see Schrijver, 'International Organization for Environmental Security', 20 *Bulletin of Peace Proposals* (1989), 115. On the proposal of UN Green Helmets', see Austrian Foreign Minister Alois Mock, 'Carrot and Stick: Spurring Conservation with a Prize and a Police Force', *Time* (Magazine), 9 October 1989, 45, referred to in Baslar, *The Concept of the Common Heritage of Mankind in International Law* (Kluwer Law International, 1998), Ph.D manuscript, at 181, n.199.

(71) On which see for instance: Dyer, 'Environmental Security as a Universal Value', in Volger & Imber (eds.), *The Environment & International Relations* (Routledge, 1996), Chap. 2; Handl, 'Environmental Security & Global Change: the Challenge to International Law', in Lang *et al.* (eds.) *Environmental Protection and International Law* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 2; Hassan, 'Moving Towards a Just International Environmental Law', in Bilderbeck, *Biodiversity in International Law* (IOS, 1992), 79, at 97; Holst, 'Security and the Environment: A Preliminary Exploration', 20 *Bulletin of Peace Proposals* (1989), 123; Magraw & Vinogradov, 'Environmental Law', in Damrosch *et al.* (eds.), *Beyond Confrontation: International Law in the Post-Cold War Era* (Westview, 1995), Chap. 7; Myers, 'Environment and Security', 74 *Foreign Policy* (1989), 23; Porter, 'Post-Cold War and Global Environmental Security', 14 *Fletcher Forum of World Affairs* (1990), 332; Sand, 'International Law on the Agenda of the United Nations Conference on Environment and Development: Towards Global Environmental Security?', 60 *Nordic JIL* (1991), 5, at 9 *et sequ.*; Sands, 'Enforcing Environmental Security', in Sands (ed.), *Greening of International Law* (Earthscan, 1993), Chap. 4, adapted version of Sands, *Principles* (Vol. I), Chap. 5; Schrijver, *supra* n. 70; Timoshenko, 'Ecological (continued)

of the mounting recognition, both among the capitalist and former socialist States, of the inter-relatedness of the world security and the global environment⁽⁷²⁾. Various proposals have been made, for a body entrusted with the enforcement of international environmental security. The proposition includes the establishment of an Environmental Security Council out of the defunct trusteeship council and to the creation of an international force that would intervene and assist the State in cases of serious environmental degradation (sort of green helmets, similar to the famous Red Adairs, according to the Soviet suggestion).

Other suggestions include the broadening of the understanding of 'security' as to encompass ecological security, so as to 'squeeze' the latter in the mandate of UN Security Council, or alternatively, the extension of the mandate of ECOSOC, originally intended to be a counterpart of the Security Council for economic and social issues, to

Security: Global Change Paradigm', 1 *Colorado JIELP* (1990), 127; Timoshenko, 'Ecological Security: Response to Global Challenge', in Brown Weiss (ed.), *Environmental Changes and International Law* (United Nations University Press, 1994), 413; Timoshenko, 'Control Machinery in the Ecological Security System', in Butler, (ed.), *Control over Compliance with International Law* (Martinus Nijhoff, 1991), 51; Tinker, '«Environmental Security» in the United Nations: Not a Matter for the Security Council', 59 *Tennessee LR* (1992), 787; Tuchman Mathews, 'Redefining Security', 68 *Foreign Affairs* (1988/89-1989/90), 162; Vavrousek, 'Institutions for International Security', in Kirkby *et al.* (eds.), *The Earthscan Reader in Sustainable Development* (Earthscan, 1995), 267; Vinogradov, 'International Environmental Security: The Concept and its Implementation', in Carty & Danilenko (eds.), *Perestroika and International Law* (Edinburgh University Press, 1990), Chap. 16; Westing, 'Environmental Component of Comprehensive Security', 20 *Bulletin of Peace Proposals* (1989), 129.

(72) The link between environment and global security was already emphasised in 1987 WCED Report; *Our Common Future* (Oxford University Press, 1987), at 19; yet the decisive step was taken in July 1988, with an Aide-Mémoire on 'Concept of International Ecological Security', submitted on behalf of the socialist countries of Eastern Europe to ECOSOC; E/1988/105, reprinted in 18 *EPL* (1988), 189. The terms of *ekologicheskaya bezopasnost* (ecological security) is attributed to Gorbachev, in his 1986 report to the 27th Communist Party Congress; Sand, 'International Law on the Agenda of the United Nations Conference on Environment and Development: Towards Global Environmental Security?', 60 *Nordic JIL* (1991), 5, at 16, n.52. In 1988, the USSR Foreign Minister addressed the Forty-Third Session of the UN General Assembly, dismissing the 'traditional approach to national and universal security, based primarily on military defence' as 'conclusively outdated and in need of revision'; UN Doc.A/43/PV.6, at 76, quoted after Schrijver, *supra*, n 70, at 115, n.3. See also Shevardnadse, 'Ecology and Diplomacy', in 20 *EPL* (1990), 20; Vinogradov, 'International Environmental Security: The Concept and its Implementation', in Carty & Danilenko (eds.), *Perestroika and International Law* (Edinburgh University Press, 1990), at 197 *et sequ.* In the same spirit, US Vice President Al Gore stated that «'national security' must be seen as more than military security»; quoted after Magraw & Vinogradov, 'Environmental Law', in Damrosch *et al.* (eds.), *Beyond Confrontation: International Law in the Post-Cold War Era* (Westview, 1995), Chap. 7, at 204.

Vinogradov stresses the importance of the position of the Soviet leadership on the issue of environmental security, as disclosing a fundamental change of attitude towards environmental problems; the author also quite rightly underlines that environmental security arises out of over-utilisation or pollution of natural resources, but can also arise out of 'unjust economic policy towards less developed countries' as disguised environmental measures; 'International Environmental Security: The Concept and its Implementation', in Carty & Danilenko (eds.), *Perestroika and International Law* (Edinburgh University Press, 1990), at 200.

include environmental issues and vest ECOSOC with the competence to negotiate promptly urgent measures to tackle imminent or actual environmental threats.

Developing States on the other hand, although the originators of an 'extensive' conception of sovereignty and major proponents of the principle of exploitation of global resources for the common benefit on mankind⁽⁷³⁾, have returned to a more classic conception of sovereignty, that guarantees each State an exclusive prerogative over its domestic natural resources. Throughout the negotiations leading to the 1992 Rio Conference on Environment and Development, based *inter alia* on the idea of partnership for a protection of the global environment⁽⁷⁴⁾, developing States consistently reaffirmed that «international cooperation [to remove the threat to the environment] should be based on full respect for the sovereignty of States»⁽⁷⁵⁾, and insisted on the principle of permanent sovereignty over natural resources being expressly enshrined in the 1992 Rio Declaration on Environment and Development⁽⁷⁶⁾.

The major factor underlying this apparent change in attitude is essentially two-fold:

First, natural resources are no longer perceived as an object of *exploitation* exclusively, but are increasingly treated as an object of *protection*. In other words, the issue is no longer solely about sharing the benefits and interests derived from the exploitation of natural resource; it also includes the sharing the conservation and management costs and responsibilities. And as one author stresses it in the context of the preservation of biodiversity:

«Numerous examples could be shown where 'national sovereignty' has been impinged in the name of exploiting natural resources; but when efforts

(73) *Supra* 2/ii. Sovereignty over Economic Assets and Policy in a New International Economic Order.

(74) See *supra* Chap. 5, Principle of Partnership.

(75) 1989 Belgrade Declaration of the Heads of State or Government of Non-aligned countries, Para. 31; see also 1991 Beijing Ministerial Declaration on Environment and Development, adopted by the Economic and Social Commission for Asia and the Pacific ESCAP whereby the Ministers from 41 developing States declared that «[i]nternational cooperation in the field of environmental protection should be based on the principle of equality among sovereign states. The developing countries have the sovereign right to use their own natural resources in keeping with their developmental and environmental objectives and priorities»; in the same sense, see 1980 Belem Declaration on the Amazonian Cooperation Treaty. The argument of sovereignty lay at the centre of developing States opposition to major environmental policy changes at 1972 Stockholm Conference on the Human Environment; see Caldwell, 'The Geopolitics of Environmental Policy: Transnational Modification of National Sovereignty', 59 *Revista Jurídica de la Universidad de Puerto Rico* (1990), 693, at 696-697.

(76) Developed States by contrast, considered that the preambular general reference to 1972 Stockholm Declaration on the Human Environment implied the recognition of permanent sovereignty over natural resources, and hence made any further referenceto this principle redundant; Porras, 'The Rio Declaration: A New Basis for International Cooperation', in Sands (ed.), *Greening International Law* (Earthscan, 1993), Chap. 2, at 30 *et sequ.*; also Berthelot, 'Are International Institution in Favour of the Environment?', in Campiglio *et al.* (eds.), *The Environment after Rio* (Graham & Trotman/Martinus Nijhoff, 1994), Chap. 19, at 271 *et sequ.*

are made to conserve those resources 'national sovereignty' is called upon to prevent those actions.»⁽⁷⁷⁾

Secondly, the mounting tendency, for the past years, to consider environmental resources as part of a global interdependent ecosystem⁽⁷⁸⁾ and to tackle environmental problems as interrelated and transcending national boundaries and interests⁽⁷⁹⁾ has broadened the circle of States (essentially developed) having an interest in the protection and preservation of natural resources hosted by other (mostly developing) States⁽⁸⁰⁾. In many respects, such globalisation of environmental interest has undermined -albeit not made wholly redundant- the relevance of political boundaries and, by the same token, that of exclusive sovereignty over natural resources now regulated and curtailed by external environmental standards for the sake of the common concern of mankind⁽⁸¹⁾.

It is not without justification that some States have expressed strong reservations towards the authenticity of industrialised States' concern for the global environment,

⁽⁷⁷⁾ McNeely, quoted after Bilderbeek (ed.), *Biodiversity and International Law* (IOS, 1992), at 79.

⁽⁷⁸⁾ Sands, 'The Environment, Community and International Law', 30 *Harvard ILJ* (1989), 393; by contrast with the classic 'compartmentalised' approach to environmental issues; see Kiss & Shelton, *International Environmental Law*, 155 *et sequ.*; see also Dupuy, 'Où en est le droit international de l'environnement à la fin du siècle?', 101 *RGDIP* (1997), 873, and *supra* Chap. 1/3/ii. Environment versus Development.

⁽⁷⁹⁾ As UNDP Administrator J.G. Speth puts it, «problems do not need passports to travel around the globe»; Address to the US Council on Foreign Relations, New York, 22 March 1995. See also Kiss, *Will the Necessity to Protect the Global Environment Transform the Law of International Relations?*, Occasional Paper (Hull University Press, 1992), 6 *et sequ.*; Fraenkel, 'The Convention on Long-Range Transboundary Air Pollution: Meeting the Challenge of International Cooperation', 30 *Harvard ILJ* (1989), 447, at 449 *et sequ.*

⁽⁸⁰⁾ Boyle, 'The Convention on Biological Diversity', in Campiglio et al (eds.), *The Environment After Rio: International Law and Economics* (Graham & Trotman/Martinus Nijhoff, 1994), Chap. 8, at 117 *et sequ.*; see *infra*, *erga omnes* environmental obligation and possibility of 'actio popularis' entailed by concept such as common concern/heritage/interest of mankind. See also *supra*, 'ingérence écologique', *supra* n. 64.

⁽⁸¹⁾ See 1989 Paris Economic Declaration of the G7 (Paras. 42-43) and 1989 Langkawi Declaration of the Commonwealth Heads of Governments (Para. 4), particularly illustrative of the mounting 'intrusiveness' of international environmental rules. See further Bothe & Hohmann, 'Internationalization of Natural Resources Management', 3 *YbIEL* (1992), 171; Caldwell, *International Environmental Policy*, at 22 *et sequ.*; Handl, 'Environmental Security and Global Change: the Challenge of International Law', in Lang et al (eds.), *Environmental Protection and International Law* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 2; Kahn & Richards, 'The Internationalization of Environmental Regulation', 30 *Harvard ILJ* (1989), 421; Kiss, 'International Protection of the Environment', in Macdonald & Johnston (eds.), *The Structure and Process of International Law* (Martinus Nijhoff, 1986), 1069, at 1083 *et sequ.*; Kiss, 'The Implications of Global Change for the International Legal System', in Brown Weiss (ed.), *Environmental Change and International Law: New Challenges and Dimensions* (United Nations University Press, 1992), Chap. 10; Sands, *supra* n. 78, at 420 *et sequ.*

For a brief review of the impact of international environmental documents on state sovereignty, see Haas & Sundgren, «cooperation is easier in small groups, where mutual verification is easier and less expensive»; 'Evolving International Environmental Law', in Choucri (ed.), *Global Accord* (MIT, 1993), 401.

and more generally towards the 'eco-centricity' of environmental concern. As Brunnée rightly pointed out, most of individual environmental interests obey egotistical (economic) considerations; common interest, as 'the result of coinciding individual interests', display more 'egocentric' than 'altruistic' features (82). Furthermore, States rich in biodiversity were obviously not keen on being reduced to the role of international reserves of biological resources, deprived of their use with no compensation. Most developing States perceived the intrusion of the environmental discourse into their sovereignty as yet another form of neo-colonialism, a new tactic to hamper their economic development(83):

«This new globalizing rhetoric, in which natural resources become common good of humankind, turn the State where the resource is located (...) into guardian of the resource - a guardian on behalf of all the people of the planet. It seeks to transform the accepted relationship between the State and its natural resources in accordance with its national policies and priorities, into one of trusteeship, where the State would be required to consider the interest of, and probably consult with, the international community before taking any action affecting the resources. Developing countries were not ready to accept the erosion of traditional sovereignty implied by such a shift...»(84)

The following statement of the Prime Minister of Malaysia at the Summit Segment of the 1992 UNCED Conference illustrates well the position of developing States:

«The poor countries have been told to preserve their forests and other genetic resources on the off-chance that at some future date something is discovered that might prove useful to humanity. This is the same as telling these poor countries that they must continue to be poor because their forests and other resources are more precious than themselves (...).

When the rich chopped down their own forests, built their poison-belching factories and scoured the world for cheap resources, the poor said nothing. Indeed they paid for the development of the rich. Now the rich claim to regulate the development of the poor countries (...) As colonies we were exploited. Now as independent nations we are to be equally exploited.»(85)

(82) Brunnée, "Common Interest" - Echoes from an Empty Shell?, 49 *ZaöRV* (1989), 791. Sir Charles Russell, speaking for the UK in *Pacific Fur Seals Arbitration* (1893), had this elegant and tactful remark about US' claim to act (and protect fur seal in the high seas) 'as the friends of humanity', under 'no selfish motives' and only 'in the interests of mankind': «Well, I am very far from doubting the sincerity of my learned friends; but I must be permitted to point out that, while accepting these professions as sincere, their demands seem to me to be exactly the demand which would be made by a selfish power making an effort to secure the seals for themselves...»; 1 Moore *International Arbitrations*, 755, at 875.

(83) Nayar & Mohan Ong, 'Developing Countries, 'Development' and the Conservation of Biological Diversity', in Bowman & Redgwell (eds.), *International Law and the Conservation of Biological Diversity* (Kluwer Law International, 1996), Chap. 12; Sands, *Principles* (Vol. I), 190.

(84) Porras, 'The Rio Declaration', in Sands (ed.), *Greening International Law* (Earthscan, 1993), Chap. 2, at 31; see also Birnie & Boyle, 114.

(85) 1992 UNCED Report, Vol III, at 232.

Three major forms of 'environmental intrusions' into domestic spheres can be distinguished out in practice: 1) the imposition of restrictive commercial measures to influence national environmental policies; 2) the enforcement of domestic environmental standards beyond national jurisdiction or within the jurisdiction of another State; and 3) the enactment of international environmental protective measures with regards to resources located or activities performed within the territorial jurisdiction of a State.

1) Restrictive commercial measures, such as the imposition of trade barriers on imports for any products harvested or manufactured according to processes or techniques that do not meet the domestic environmental standards of the importing States, are perhaps the most common and most efficient tool available to certain economically powerful States to influence the domestic environmental policy of other States. One can mention, for instance, the US imposition of trade restrictions upon tuna fished according to methods which incur a percentage of incidental death of dolphins in excess of US national standards⁽⁸⁶⁾, US embargo on specific shrimp imports from countries that do not require their trawlers to use turtle excluder devices⁽⁸⁷⁾, Canada's

(86) See First Gatt Panel Report in the matter of *US-Restrictions on Imports of Tuna* (1991), 30 *ILM* (1991), 1594 (Tuna/Dolphin I); Second Gatt Panel Report in the matter of *US-Restrictions on Imports of Tuna* (1994), 33 *ILM* (1994), 839 (Tuna/Dolphin II); on which see *inter alia* Kingsbury, 'The Tuna-Dolphin Controversy, the WTO and the Liberal Project to Reconceptualize International Law', 5 *YbIEL* (1994), 1. See also Canada-US Free Trade Agreement Panel Report in the matter of *Lobsters from Canada* (1990), concerning the imposition of a minimum size for the lobsters exported to US, to preserve the depletion of the stocks of lobsters; referred after Sands, *Principles* (Vol 1), 707.

(87) The uses of such device is made mandatory under the US 1989 Sea Turtles Conservation Amendments to the 1973 Endangered Species Act, codified at 16 USC §§1531-1544 (1988); such requirement is justified with the necessity to preserve the dwindling sea turtle population; a WTO panel was set up early 1997, upon request from India, Thailand, Malaysia and Pakistan, to consider the justifiability of the measure under the Gatt requirement; see McDorman, 'The Gatt Consistency of US Fish Import Embargoes to Stop Driftnet Fishing and Save Whales, Dolphins and Turtles', 14 *George Washington JIL & Economics* (1990-91), 477, at 495; see also Kaczka, 'A Primer on the Shrimp-Sea Turtle Controversy', 6 *RECIEL* (1997), 171. The 1973 Endangered Species Act was also challenged in front of US Courts, for applying outside the US territorial jurisdiction, to federal agencies' projects and actions occurring in foreign countries; see Robbins, 'Environment -Endangered Species- Extraterritorial Application of the Endangered Species Act of 1973, *Defenders of Wildlife v. Lujan*, 91 F.2d. 117 (8th Cir.1990), cert. granted, *Lujan v. Defenders of Wildlife*, 111 S.Ct. 2008 (1991)', 21 *Georgia JICL* (1991), 575; and review of the latest development: Just, 'Comment: Intergenerational Standing under the Endangered Species Act: Giving Back the Right to Biodiversity after *Lujan v. Defenders of Wildlife*', 71 *Tulane LR* (1996), 597.

Different is the case of the US 1979 Packwood Magnuson Amendment to the 1976 Magnuson Fishery Conservation and Management Act (16 US §§ 1801-1882 (1988)), which confers a discretionary power to the Secretary of Commerce to impose trade sanctions upon on all fish products imported from countries which fail to abide by the *international* whaling quotas set by the *International Whaling Commission* under the 1946 Whaling Convention; *Japan Whaling Association v. American Cetacean Society*, 478 US 221 (1986); on which see Haskell, 'Abandoning Whale Conservation Initiative in *Japan Whaling Association v. American Cetacean Society*', 11 *Harvard ELR* (1987), 551; Morley's note at 11 *Suffolk Transnat.LJ* (1987), 287.

import ban on certain sort of unprocessed fish⁽⁸⁸⁾ and the Dutch ban on import of birds yet lawfully hunted in the exporting country, on the ground that such birds were held as endangered in the Netherlands⁽⁸⁹⁾. The sole limits to any such restrictive measures are set out in the various free trade agreements, that tolerate health and environment exceptions to free trade principles only 'when necessary to protect human, animal or plant life or health', or when primarily aimed at 'the conservation of exhaustible natural resources', insofar as the restrictive measure does not constitute a disguised discriminatory trade barrier⁽⁹⁰⁾.

These environmental exceptions have been the object of restrictive interpretation by the dispute settlement bodies set up under the respective free trade agreements, largely supported in that sense by the doctrine⁽⁹¹⁾. Various *ad hoc* Gatt/WTO panels, for instance, have consistently applied a strict understanding of the *necessary* test (1947 Gatt, Art. XX(b))⁽⁹²⁾ and *relating to - primarily aimed at* test (1947 Gatt,

(88) Gatt Panel Report in the matter of *Canada-Measures Affecting Import of Unprocessed Herring and Salmon* (1988), BISD/35S/98, noted at 27 *ILM* (1988), 1599; on which see McDorman, 'International Trade Law Meets International Fisheries Law: the Canada-US Salmon and Herring Dispute', 7 *Journal of International Arbitration* (1990), 107.

(89) EEC Case C-169/89, Criminal Proceedings against Gourmetterie Van Den Burgh (*Red Grouses* case), [1990] *ECR* I-143.

(90) See for instance 1947 Gatt Art. XX(b) and (g), preserved in 1994 Gatt, with an introductory clause (referred to as the chapeau of Art. XX) which states that the measures taken under the general exceptions shall not be applied «in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade...». See also 1986 EC Treaty, Art. 36; 1992 NAFTA (superseding 1987 Canada-US Free Trade Agreement), Arts. 712(2), 904(2) and 905(1), preserve the right of the contracting parties to establish its 'appropriate levels of protection' and take any standards-related measures to preserve human, animal or plant life or health. For a brief comparison of these environmental exceptions, see Montini, 'The Nature of the Necessity and Proportionality Principles in the Trade and Environment Context', 6 *RECIEL* (1997), 121.

(91) See *inter alia* Birnie & Boyle, at 131-132; Brown Weiss, 'Environment and Trade as Partners in Sustainable Development: a Commentary', *Agora - Trade and Environment*, 86 *AJIL* (1992), 728; Charnovitz, 'Exploring the Environmental Exceptions in Gatt Article XX', 25 *JWT* (1991), 37; Charnovitz, 'Environmentalism Confronts Gatt Rules', 27 *JWT* (1993), 37; Kingsbury, 'Environment and Trade: The GATT/WTO Regime in the International Legal System', in Boyle (ed.), *Environmental Regulation and Economic Growth* (Clarendon, 1994), Chap. 9, at 206 *et sequ.*; McDorman, 'The Gatt Consistency of US Fish Import Embargoes to Stop Driftnet Fishing and Save Whales, Dolphins and Turtles', 14 *George Washington JIL & Economics* (1990-91), 477, at 507 *et sequ.*; Sands, *Principles* (Vol. I), Chap. 18; Schiffman, 'The Protection of Whales in International Law: Perspective for the Next Century', 22 *Brooklyn JIL* (1996), 303, at 334-43; Schoenbaum, 'Free International Trade Protection of the Environment: Irreconcilable Conflict?', *Agora - Trade and Environment*, 86 *AJIL* (1992), 700.

(92) The necessity test under Art. XX(b), first considered in the *Thailand-Restrictions on Importation of and Internal Taxes on Cigarettes*, 7 November 1990, BISD 37S/200, is inspired from the interpretation of the necessity test under Art. XX(d) exception. In the *Section 337* case, 7 November 1989, BISD 36S/345, a Gatt Panel found that «a contracting party cannot justify a measure inconsistent with other Gatt provisions as 'necessary' in terms of Article XX(d) if an alternative measure which could reasonably be expected to employ and which is not inconsistent with other Gatt provisions is available to it»; at Para. 5.26.

Art. XX(g))⁽⁹³⁾. It is considered that, to effectively preserve a given environmental resource, a restrictive trade measure has to be taken 'in conjunction with a similar restriction on domestic production and consumption'⁽⁹⁴⁾.

The necessity test might find a slightly less stringent application in the EC context, as testified by the decision of the European Court of Justice partly upholding a Danish piece of legislation restricting the marketing of non-reusable drink containers as «necessary to attain the objectives of the disputed regulations»⁽⁹⁵⁾. Some authors contend more generally that the interpretation of the environmental exceptions applied under the 1947 Gatt is more stringent than under EC regime, and that the European Court of Justice, which has declared itself bound by the Gatt⁽⁹⁶⁾ might review its

(93) In the dispute concerning the restriction on imports of unprocessed herring and salmon by Canada, *supra* n. 88, Canada tried to justify the measure as necessary and essential to conserve specific natural resources (Gatt Art. XX(g)). The Gatt panel found however that the measures did not meet the necessary requirements under Gatt environmental exception: 1) they were not 'primarily aimed at conservation', and 2) were not taken in conjunction with parallel restrictions on domestic consumption and production. Subsequent to that decision, Canada passed a new regulation whereby any salmon or herring caught in its exclusive fishing zone had to be landed in Canada before exportation. The US challenged the measure, this time under the Canada-US Free Trade Agreement; the bi-national panel found, *inter alia*, that the landing requirements could not be justified as environmental conservation measures; Canada-US Free Trade Agreement Panel Report in the matter of *Canada-Landing Requirements for Pacific Coast Salmon and Herring* (1989), 30 *ILM* (1991), 181; on which see Sands, *Principles* (Vol 1), 692 and 707. A similarly restrictive understanding of both 'necessity' and 'relating to test' was applied in the Tuna/Dolphin I and II, *supra* n. 86, and in the first WTO panel confronted with an environmental dispute. The dispute was brought by Venezuela and Brazil, and concerned the enforcement of different standards for imported 'reformulated' gasoline and for domestically refined version. The WTO Panel recognised the right of the US to set the environmental standards for its own production, but considered that the application of different standards to foreign production was contrary to the free trade rules, namely the national treatment principle; WTO Panel Report in the matter of *US-Standards for Reformulated and Conventional Gasoline*, WT/DS2/R, 29 January 1996. The WTO Panel decision was upheld in its outcome (albeit not without some criticisms as to its reasoning) by the WTO Appellate Body, WT/DS2/AB/R, 20 May 1996, 35 *ILM* (1996), 603; see further Appleton, 'Gatt Article XX's Chapcau: A Disguised 'Necessary' Test?: The WTO Appellate Body's Ruling in *United States - Standards for Reformulated and Conventional Gasoline*', 6 *RECIEL* (1997), 131; Robert, 'L'affaire des normes américaines relatives à l'essence', 101 *RGDIP* (1997), 108.

(94) See Gatt Panel Report in the matter of *US-Prohibition of Imports of Tuna and Tuna Products from Canada* (1982), BISD/29S/91; on which see McDorman, 'The Gatt Consistency of US Fish Import Embargoes to Stop Driftnet Fishing and Save Whales, Dolphins and Turtles', 14 *George Washington JIL & Economics* (1990-91), 477, at 511 *et sequ.*; Sands, *Principles* (Vol 1), 691. The Dispute was triggered by the seizure of 19 fishing boats by Canada within its 200-nautical-mile exclusive fishing zone. The US, having consistently denied the application of the 200-mile limits with respect to highly migratory species, retaliated with an embargo on Canadian tuna, which it tried to justify as a necessary measure to conserve and preserve an exhaustible natural resources in the sense of Gatt Art. XX(g). Such argument was dismissed by the Gatt panel, on the ground that the measures was not made 'in conjunction with similar restriction on domestic production and consumption', and was therefore discriminatory.

(95) EEC Case C-302/86, *Commission v. Denmark (Danish Bottles case)*, [1989] 1 *CMLR*, 619 at 631.

(96) See EEC Joined Cases 21-24/72, *International Fruit Co. v. Produktschap voor Groenten en Fruit*, [1972] *ECR* I-1226.

position and bring it in line with the Gatt rulings⁽⁹⁷⁾. Albeit short of constituting a case of extraterritoriality of domestic environmental laws *stricto sensu* in the sense that the domestic regulations apply to the foreign products only insofar as those products try to enter the jurisdiction of the importing State, trade restrictive measures represent nonetheless a subtle, efficient way, and within certain limits, an admissible way to influence the sovereign competence of exporting State upon its natural resources and to impose foreign standards⁽⁹⁸⁾.

2) On the other hand, it appears that, at least under the Gatt system⁽⁹⁹⁾, the environmental exception does *not* encompass domestic measures taken *beyond* the jurisdiction of any States⁽¹⁰⁰⁾, or within the jurisdiction of *another* State⁽¹⁰¹⁾.

(97) Sands, 'Danish Bottles and Mexican Tuna', 1 *RECIEL* (1992), 28, at 33

(98) A number of international environmental law instruments explicitly rely on the use of national sanctions, *inter alia* foreign trade sanctions, for the implementation of the treaty objectives in other States; see most notably 1973 CITES, Art. 8; 1987 Montreal Protocol on the Ozone Layer, Art. 4(1); 1989 Basel Convention on Transboundary Movement of Hazardous Wastes, Art. 9(5). On the use of trade sanctions to achieve environmental purposes, see further Jenkins, 'Trade Sanctions: Effective Enforcement Tools', in Cameron *et al.* (eds.), *Improving Compliance with International Environmental Law* (Earthscan, 1996), Chap. 10; Sand, 'International Economic Instruments for Sustainable Development: Sticks, Carrots and Games', 26/2 *Indian JIL* (1996), 1.

(99) See Tuna/Dolphin I and II, *supra* n. 86; see also Birnie & Boyle, at 131-132.

(100) A classic example being the dispute that arose between the US and the UK over the right of the former to take effective measures to preserve fur seals in Bering Sea beyond territorial water «based upon established principles of the common and the civil law, upon the practice of nations, upon the laws of natural history, and upon the common interest of mankind»; *Pacific Fur Seals Arbitration* (1893), 1 *Moore International Arbitrations*, 755, at 811; on which see Birnie & Boyle, 493 *et sequ.*; Sands, *Principles* (Vol 1), 415 *et sequ.* See also the latest fisheries case opposing Spain and Canada, pending before the ICJ. The case arose out of the boarding of a Spanish fishing boat by Canadian fisheries protection authorities on the high sea adjacent Canada's 200 nautical miles exclusive fisheries zone (in NAFO Regulatory Area) on March 1995, on the allegation that the vessel was fishing in breach of NAFO conservation and management measures, and in application to the Canadian Coastal Fisheries Protection Act. The Act, which expressly permits Canadian authorities *inter alia* to disallow (if necessary by force) foreign vessels in NAFO Regulatory Area fishing in contravention of any of the conservation and management measures prescribed by NAFO, was enacted in reaction to the European Commission's decision to set its own fishing quotas within the overall allowable catch ceiling fixed by a majority vote in the Northwest Atlantic Fisheries Organization, in disregard of those (lower) quotas attributed to it by NAFO; see Canadian Coastal Fisheries Protection Act as amended 12 May 1994, reprinted in 33 *ILM* (1994), 1383, more partic. Sect. 5.2. In its application to the ICJ, filed on 28 March 1995, Spain alleged the boarding of the *Estai* infringes (a) the freedom of the high seas, and (b) the sovereign rights of Spain, and requested the ICJ to declare, *inter alia*:

«(A) that the Court find that the legislation of Canada, in so far as it claims to exercise a jurisdiction over ships flying a foreign flag on the high seas, outside the exclusive economic zone of Canada, is not opposable to the Kingdom of Spain;

(B) (omitted)

(C) that consequently, the Court declares also that the boarding on the high seas (...) of the ship *Estai* (...), and the measures of coercion and the exercise of jurisdiction over that ship and over its captain, constitutes a concrete violation of the (...) *principles and norms of international law*;»

(continued)

The issue is already less clear-cut under EC Treaty, Art. 36. In the Tuna/Dolphin II, the EC Commission dismissed the US interpretation of the *Red Grouses* case⁽¹⁰²⁾ as a recognition that «Article 36, like the corresponding provision in the General Agreement, contained no jurisdictional limitation in the text, permitted measures to protect bird life not only in the country's territory, but also outside of it»⁽¹⁰³⁾. The Commission contended that the US had misunderstood the case, and argued that «...the Court had simply ruled that Article 36 of the Treaty of Rome could not be invoked by a member State when a Community Directive provided for full harmonisation of national legislation in the relevant policy area. The Court said nothing else concerning the interpretation of Article 36»⁽¹⁰⁴⁾. Krämer is one of the few authors to have expressed a clear-cut opinion in favour the absence of geographical limitation to the EC Treaty requirement of the protection of the environment (Art.36)⁽¹⁰⁵⁾.

The extraterritorial application of environmental regulations was raised at the 1992 Rio Conference on Environment and Development by Latin American and EC States, alarmed by the mounting tendency of the US to resort to trade regulations to influence environmental practices of certain countries and protect its own market. Any attempt to decide the issue fell through; the 1992 Rio Declaration on Environment and

ICJ Communiqué No 25/9, 29 March 1995, at 2 (emphasis added). Canada has adopted a similar line of arguments as the US in the Tuna/Dolphin I and II, and invoked environmental necessity to protect dwindling stocks of Greenland halibut from over fishing, and the necessity to respect NAFO total catch and allocated quotas. Hence the matter is one of unilateral enforcement of NAFO measures in NAFO Regulatory Area more than a case of extraterritorial application of domestic law; Freestone, 'Canadian and the EU Reach Agreement to Settle the *Estai* Dispute', 10 *IJ Marine & Coastal L* (1995), 397, at 400; Lugten, 'Fisheries War for the Halibut', 25 *EPL* (1995), 223; Joyner & von Gustedt, 'The Turbot War of 1995: Lessons for the Law of the Sea', 11 *IJ Marine & Coastal L* (1996), 425. For an analysis of the dispute under the angle of environmental law rules and principles, more particularly the law of the Sea framework: Davies & Redgwell, 'The International Legal Regulation of Straddling Fish Stocks', 67 *British YbIL* (1997), 199. For an examination of the dispute under the general rules and principles of international law: Davies, 'The EC/Canadian Fisheries Dispute in the North West Atlantic', 4 *ICLQ* (1995), 927, at 933 *et sequ.* The Court has first to decide on its jurisdiction, as Canada had entered a reservation on its previous recognition of the ICJ mandatory jurisdiction only days before the entry into force of the disputed 1994 Amendment to the 1985 Coastal Fisheries Protection Act, excluding the ICJ's jurisdiction for most of the disputes arising out of the application of the Act; see Davies & Redgwell, *ibid.*, at 212 *et sequ.*

(101) US Dolphin friendly measures for instance applied to tuna caught in the Eastern Tropical Pacific Ocean which, as defined under the US Marine Mammal Protection Act, Mexican coasts and exclusive economic zone; see (Tuna/Dolphin I), 30 *ILM* (1991), 1594, at 1602.

(102) *Supra* n. 89.

(103) Tuna/Dolphin II, *supra* n. 86, at Para. 3.25.

(104) *Ibid.* at Para. 3.48.

(105) 'Environmental Protection and Article 30 EEC Treaty', 30 *Common Market Law Review* (1993), 111, at 118-119.

Development adopts a *formule de compromis*⁽¹⁰⁶⁾, and merely recommend importing States to abstain from unilateral actions to address environmental challenges outside their jurisdiction⁽¹⁰⁷⁾.

In its interpretative statement of principle 12, the US declared that «in certain situations, trade measures may provide an effective and appropriate means of addressing environmental concerns, including (...) *environmental concerns outside national jurisdiction, subject to certain discipline*»⁽¹⁰⁸⁾. The European Community in the Tuna/Dolphin II, inspired by the equivocal *dictum* of the PCIJ in the *SS Lotus* case⁽¹⁰⁹⁾, followed a more classic conception of extraterritorial measures and invoked, among the relevant rules of customary international law to define the limits to state jurisdiction, «the basic principle that a law should not be interpreted as having extra-territorial jurisdictional effect, in accordance with the duty of non-intervention, unless there were explicit indications to the contrary»⁽¹¹⁰⁾.

(106) Lang, 'Les mesures commerciales au service de la protection de l'environnement', 99 *RGDIP* (1995), 545, at 560.

(107) Princ. 12; see also 1992 Agenda 21, Paras. 2.21(a) and 2.22(c) and (d).

(108) Quoted after Kovar, 'A Short Guide to the Rio Declaration', at 133 (emphasis added). The US confirmed its positions in the Tuna/Dolphin II, and, referring to 1992 Rio Declaration, Princ. 12, underlined that, while no international law provision expressly provides for the extraterritorial application of domestic environmental norms, no provision precludes it either; Para. 3.18; on which see Sands, *Principles* (Vol. I), 190.

(109) In the *Lotus* case, the Court first set the basic rule according to which «...the (...) foremost restriction imposed by international law upon a State is that -failing the existence of a permissive rule to the contrary - it may not exercise its power in any form in the territory of another State»; in the next paragraph it went on saying that «[f]ar from laying down a general prohibition to the effect that State may not extend the application of their laws and the jurisdiction of their courts to persons, property and acts outside their territory, [this basic rule] leaves them in this respect a wide measure of discretion which is only limited in certain cases by prohibitive rules...»; *The Case of the S.S. "Lotus"*, PCIJ Ser. A-No 10, September 7th, 1927, at 19-20. And whilst substantial clarification has been brought by the doctrine as to the various possible grounds justifying state extraterritorial jurisdiction, the conditions of exercise and limits thereto have remained extremely nebulous; see *inter alia* Brownlie, *Principles*, 307 *et sequ.*; Dixon & McCorquodale, *Cases & Materials*, Chap. 8; *Oppenheim's International Law* Vol. 1, § 138. Also: Akehurst, 'Jurisdiction in International Law', 45 *British YbIL* (1972-73), 145, at 190 *et sequ.*; Higgins, 'The Legal Bases of Jurisdiction', in Olmstead (ed.), *Extra-Territorial Application of Laws and Responses Thereto* (ILA-ESC, 1984), Chap. 3; Mann, 'The Doctrine of Jurisdiction in International Law', 111 *RdC* (1964-I), 1, at 126 *et sequ.*; Mann, 'The Doctrine of Jurisdiction Revisited After Twenty Years', 186 *RdC* (1984-III), 9, at 20 *et sequ.*

(110) Tuna/Dolphin II, at Paras. 3.38. The European Union adopted a similarly rigid stance in the recent conflict over the D'Amato and Helms-Burton Acts, whereby the US reserved its rights to penalise non US enterprises maintaining commercial links with 'outcast' countries; see US Cuban Liberty and Democratic Solidarity Act of 1996 (Helms-Burton Act), 35 *ILM* (1996) 357; US Iran and Libya Sanctions Act of 1996 (D'Amato Act), 35 *ILM* (1996) 1273. The Council of the European Union declared that «...by their extra-territorial application such laws, regulations and other legislative instruments [which purport to regulate activities of natural and legal persons under the jurisdiction of the Member State] violate international law...»; EC Regulation No 2271/96, 22 November 1996, reproduced in 36 *ILM* (1997), 127. Canada and Mexico adopted a similar stance and passed legislation to counter both Acts; see Canadian Foreign Extraterritorial Measures Act, 36 *ILM* (1997), 111; Mexican Act to
(continued)

Maybe more than any other areas of the law, the application of environmental law raises question of extraterritoriality, due to the nature of its object. Some natural resources (migratory species for instance) can simply not be attached to one single jurisdiction, or to any jurisdiction at all (high seas resources)⁽¹¹¹⁾. Such resources are bound to generate jurisdictional conflicts, unless and until there are international norms to co-ordinate their use and assure their protection. Likewise, environmental pollution knows no political borders, and the discrepancy between the geographical scope of the legal rule and the geographical scope of the issue to be tackled entails serious risks of a legal loophole⁽¹¹²⁾. It is therefore a matter of urgency (a) to set clear limits to the application and enforcement of domestic environmental laws, and (b) to provide for a regional or international co-operation regime where no domestic law applies⁽¹¹³⁾.

3) *International* environmental rules that impose certain restrictions upon States with regard to their own domestic environment or to common areas, whilst carrying more 'legitimacy' than unilateral measures imposed by one State are nonetheless perceived as an interference into state sovereignty over domestic natural resources. In this respect, the adoption of international standards pertaining to natural resources clearly and definitely located within national jurisdiction proved particularly controversial in that respect, and revived old claims of sovereignty over natural resources.

Sovereignty was the object of particular controversy throughout the negotiations leading to the 1992 Biodiversity Convention⁽¹¹⁴⁾. On the one hand, developing States

Protect Trade and Investment from Foreign Norms that Contravene International Law, 36 *ILM* (1997), 133. For a general comment on D'Amato and Helms-Burton Acts, see for instance Lowe, 'Extraterritorial Jurisdiction: the Helms-Burton and D'Amato Acts', 46 *ICLQ* (1997), 378; Lowenfeld, 'Congress and Cuba: The Helm-Burton Act', *Agora -The Cuban Liberty & Democratic Solidarity (LIBERTAD) Act*, 90 *AJIL* (1996), 419; and Clagett, B.M., 'A Reply to Professor Lowenfeld', *ibid.*, 641.

(111) US argument in the Tuna/Dolphin II, *supra* n. 86, at Paras. 3.18.

(112) Wolfrum, 'Die grenzüberschreitende Luftverschmutzung im Schnittpunkt von nationalem Recht und Völkerrecht', 99 *DVBl.* (1984), 492, at 494; also Handl, 'Territorial Sovereignty and the Problem of Transfrontier Pollution', 69 *AJIL* (1975), 58.

(113) The protection of straddling fish and migratory species constitutes a clear illustration of the necessity to enact certain international rules to complement and coordinate domestic measures; it is also an example of the reluctance of States in general (in this case, non coastal States involved in fishing in the high seas), towards the extension of domestic rules of given States (coastal States) to common areas. Short of recognising the controversial preferential right of coastal States on the protection of straddling fish in high seas, the 1995 Straddling Fish Stocks Agreement endorses rather a regime of joint co-operative effort of coastal and fishing States; see *inter alia* Art. 5. On the negotiation leading to the agreement and more particularly on the preferential right of coastal States, see Lucchini, 'Stocks Chevauchants - Grands Migrateurs', in Al-Nauimi & Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, 1995), 513; also Davies, & Redgwell, 'The International Legal Regulation of Straddling Fish Stocks', 67 *British YbIL* (1997), 199.

(114) For a detailed review of the negotiation of the Convention, see Burhenne-Guilmin *et al.*, *A Guide to the Convention on Biological Diversity Environmental Policy & Law Paper No. 30* (IUCN Environmental Law Center, 1994); Bilderbeek (ed.), *Biodiversity and International Law* (IOS, 1992); (continued)

lobbied for an explicit recognition of their sovereignty over the biological resources under their jurisdiction⁽¹¹⁵⁾ and access thereto based on 'mutual agreement between countries'⁽¹¹⁶⁾; on the other, developed States were eager to balance national sovereignty with responsibility towards other nations⁽¹¹⁷⁾. The suggestion to add the conservation of biodiversity to the list of elements considered to be the common *heritage* of mankind was rejected outright as inapplicable⁽¹¹⁸⁾. The conservation of biodiversity, like climate change⁽¹¹⁹⁾, was finally declared a common *concern* of humankind, as to imply a general and common obligation of all States 'towards an issue that is of paramount importance to the international community'⁽¹²⁰⁾.

Nevertheless, it remains the case that the 1992 Biodiversity Convention 'leans much more to the side of national sovereignty'⁽¹²¹⁾, implying little more than effective co-

McConnell, *The Biodiversity Convention, a Negotiating History* (Kluwer Law International, 1996). Generally Convention: Boyle, 'The Convention on Biological Diversity', *supra* n. 80; Bowman & Redgwell (eds.), *International Law and the Conservation of Biological Diversity* (Kluwer Law International, 1996); Bragdon, 'National Sovereignty and Global Environmental Responsibility: Can the Tension be Reconciled for the Conservation of Biological Diversity?', 33 *Harvard ILJ* (1992), 381; Burhenne-Guilmin & Casey-Lefkowitz, 'The Convention on Biological Diversity: A Hard Won Global Achievement', 3 *YbIEL* (1992), 43; Chandler, 'The Biodiversity Convention: Selected Issues of Interest to the International Lawyer', 4 *Colorado JIELP* (1993), 141.

(115) Chandler, 'The Biodiversity Convention: Selected Issues of Interest to the International Lawyer', at 145.

(116) Quoted after Porter & Brown, *Global Environmental Politics* (Westview, 1991), 131; see also Sell, 'North-South Environmental Bargaining: Ozone, Climate Change and Biodiversity', 2 *Global Governance* (1996), 97, at 110 *et sequ.*

(117) McConnell, *supra* n. 114, at 89; see also Bell, 'The 1992 Convention on Biological Diversity: the Continuing Significance of US Objections at the Earth Summit', 26 *George Washington JIL & Economics* (1993), 479.

(118) Developing States opposed such qualification, which they considered unsuited to natural resources located in great majority on national territory. More generally, no State was willing to revive the old political controversy about the regime of exploitation of the common heritage of mankind; Burhenne-Guilmin & Casey-Lefkowitz, *supra* n. 114, at 47 *et sequ.*, and 53 *et sequ.* See *infra* Chap. 5/2/iv. Common Concern, Common Interest of Mankind: Global Partnership or Global Bargain?.

(119) 1992 Climate Change Convention, preambular Para. 1; Para. 9 reaffirms the principle of sovereignty of States in the international co-operation to address climate change.

(120) Burhenne-Guilmin & Casey-Lefkowitz, *supra* n. 114, at 48; see more generally Boyle, 'The Convention on Biological Diversity', *supra* n. 80; Kiss, 'The International Protection of the Environment', in Macdonald & Johnston (eds.), *The Structure and Process of International Law: Essays in Legal Philosophy Doctrine and Theory* (Martinus Nijhoff, 1983), 1069, at 1084. See *infra* Chap. 5/2/iv. Common Concern, Common Interest of Mankind: Global Partnership or Global Bargain?.

(121) Klemm & Shine, *Biological Diversity Conservation and the Law*, 54; Chandler, 'The Biodiversity Convention: Selected Issues of Interest to the International Lawyer', at 147 *et sequ.*; permanent sovereignty over genetic resources is reaffirmed in the Preamble (Para. 4), and at Arts. 3 and 15. Subsequent State practice has confirmed such inclination, as several States have availed themselves of the possibility, under the 1992 Biodiversity Convention, to enact unilateral measures to control access and exploitation to wild resources located on their territory, and even claim participation to the benefit derived therefrom; see for instance Costa Rica Wildlife Protection Act October 1992; and 1994
(continued)

operation, and entailing no fundamental reconsideration of the legal status of biological resources⁽¹²²⁾:

- 1) State sovereignty over natural resources located on its territory suffers no more compelling or far-reaching restrictions than already imposed under general international law⁽¹²³⁾, and *inter alia* under the no substantial harm principle⁽¹²⁴⁾. Besides, each State retains sole competence to control and regulate access to its biological resources⁽¹²⁵⁾.
- 2) The obligations imposed by the Convention, as a rule, do not engage the State beyond the limits of its national jurisdiction⁽¹²⁶⁾, hence precluding any attempts to infer any extra-territorial jurisdiction from the qualification of common concern of mankind. However, whilst the declaration of common concern of mankind does not justify any intrusion into the permanent sovereignty of States on environmental grounds, it also precludes any exclusive conception of such sovereignty by the host State as 'a basis for exclusion for others'; rather, it entails a 'commitment to co-operate for the good of the international community at large'⁽¹²⁷⁾.

Amendment to the Western Australia Constitution; reported in Johnston, 'Sustainability, Biodiversity and International law', in Bowman & Redgwell (eds.), *International Law and the Conservation of Biological Diversity*, (Kluwer Law International, 1996), Chap. 3, at 68.

(122) Boyle, 'The Convention on Biological Diversity', in Campiglio et al (eds.), *The Environment After Rio: International Law and Economics* (Graham & Trotman/Martinus Nijhoff, 1994), Chap. 8, at 117.

(123) See *infra* 4/
 ii. Towards a Limited Sovereignty over Natural Resources. Some authors however, seem to attach a particular significance to the fact that the Preamble first qualifies the conservation of biodiversity as of common interest of mankind, and then affirms the principle of permanent sovereignty over natural resources; Burhenne-Guilmin & Casey-Lefkowitz, *supra* n. 114.

(124) As understood under 1972 Stockholm Declaration on the Human Environment Princ. 21, reproduced *verbatim* at Art. 3 of the 1992 Biodiversity Convention. General duties of conservation and sustainable use are set forth at Arts. 6-9.

(125) Art. 15; the issue of access to genetic resources have always been the object of controversy. On the one hand, the principle of free access to wild natural resources had long been regarded as the rule, and was *inter alia* embodied in the non-binding FAO Undertaking on Plant Genetic Resources 1983, assimilating plant genetic resources to a heritage of mankind; Boyle, 'The Convention on Biological Diversity' *supra* n. 122. On the other hand, such freedom has been largely curtailed by domestic legislation passed by major host States, that restrict the access to natural resources; Burhenne-Guilmin & Casey-Lefkowitz, *supra* n. 114, at 52 *et sequ.*

(126) Art. 4; except where expressly provided otherwise. The jurisdiction limitation clause was introduced in the last minute only, at the instance of host States of biodiversity; Bell, *supra* n. 117.

(127) Handl, *supra* n. 81, at 87; Boyle, 'The Convention on Biological Diversity' *supra* n. 122, at 117-118.

Developed and developing States followed a similar line of argument during the negotiation of a global regime for tropical forests⁽¹²⁸⁾, and more recently, during the renegotiation of the International Timber Agreement 1983⁽¹²⁹⁾. Like biodiversity, early proposals had been made to consider tropical forests as the common heritage of mankind, or put them under some sort of 'global stewardship'⁽¹³⁰⁾. The negotiation of an internationally binding agreement on Forestry management was finally postponed in the process leading to the 1992 Rio Conference on Environment and Development⁽¹³¹⁾,

(128) See generally Brunnée, 'A Conceptual Framework for an International Forests Conventions: Customary Law and Emerging Principles', in Canadian Council on International Law (ed.), *Global Forests and International Environmental Law* (Kluwer Law International, 1996), Chap. 2; Myers, 'The Anatomy of Environmental Action: the Case of Tropical Deforestation', in Hurrell & Kingsbury, *The International Politics of the Environment* (Clarendon, 1992), Chap. 16; Sands, *Principles* (Vol. I), 406 *et sequ.*; Saunders, 'Valuation and International Regulations of Forest Ecosystems: Prospects for a Global Forest Agreement', 66 *Washington LR* (1991), 871; Schally, 'Forests: Towards an International Legal Regime?' 4 *YbIEL* (1993), 30; Dan Tarlock, 'Exclusive Sovereignty versus Sustainable Development of a Shared Resource: the Dilemma of Latin American Rainforest Management', 32 *Texas ILJ* (1997), 37; Yamin & Flint, '1992: the Year in Review - Forests', 3 *YbIEL* (1992), 326. See also Yamin & Cameron, *Convention for the Conservation and Wise Use of Forests Draft Text*, (Center for International Environmental Law, 1991).

(129) Humphreys, 'Hegemonic Ideology and the International Tropical Timber Organisation', in Vogler & Imber (eds.), *The Environment and International Relations* (Routledge, 1996), Chap. 12.

(130) See for instance FAO draft proposal for a Forestry Convention; on which see Schally, 'Forests: Towards an International Legal Regime?', at 41.

(131) An early proposal for a global convention on forests had been made by the US at a G7 summit in 1990; Weiss, 'Introductory Note' to a selection of UNCED documents, 31 *ILM* (1992), 814, at 817; Cameron & Yamin, '1990: the Year in Review - Forests', 1 *YbIEL* (1990), 201. Such initiative was perceived with great suspicion by developing States hosting the great majority of world forests, as a «crafty manipulation to avoid taking tough reductions in greenhouse gas emissions in favour of capitalizing on tropical forests as convenient carbon sinks»; Vander Zwaag & MacKinlay, 'Towards a Global Forests Convention: Getting Out of the Woods and Barking up the Right Tree', in Canadian Council on International Law (ed.), *Global Forests and International Environmental Law*, Chap. 1, at 1. Very illustrative of such attitude is the statement made by the Prime Minister of Malaysia at the Summit Segment of 1992 UNCED Conference; 1992 UNCED Report, Vol. III, at 230; reproduced *infra*

Hence, the reticence of developing States towards a global forestry Convention pertains to the real motives behind industrialised States' concern and this appearance of 'ingérence écologique' from the part of non-host States, rather than to the idea of co-operation itself; all attempts from Western powers to invoke the 'public good' nature of the Amazon forests (to pressurise Brazil to take appropriate measures to preserve it) was fiercely denounced by Brazilian government as an illegitimate interference with Brazil's internal affairs and violation of its sovereignty; see Goldenberg & Durham, 'Amazonia and National Sovereignty', 2 *International Environmental Affairs* (1992), 22; McClearly, 'The International Community's Claim to Rights in Brazilian Amazonia', 39 *Political Studies* (1991), 69; see also Baslar, *The Concept of the Common Heritage of Mankind in International Law* (Kluwer Law International, 1998), Ph.D manuscript, at 168 *et sequ.*, on the relevance of the concept of common heritage of mankind in the case of the Brazilian Amazon, and the difficulties raised by the application of such concept to natural resources under national jurisdiction.

On the other hand, regional agreements have been concluded among host States, for the conservation of forestry resources; see for instance 1978 Amazon Treaty, whereby Amazon Basin States commit themselves to preserve the natural resources in the region, including the Amazon forests; Art. IV reaffirms nonetheless the permanent sovereignty over the natural resources located under the jurisdiction of one State. See also Regional Convention for the Management and Conservation of Forest Natural Ecosystems (*continued*)

and only a set of non-binding general principles was produced, which largely privileges the arguments put forward by developing States. Permanent sovereignty of States over their forestry resources is fully recognised⁽¹³²⁾, with no further restrictions than those already imposed under the 1972 Stockholm Declaration on the Human Environment, Principle 21⁽¹³³⁾. Priority is given to action at national level. Unlike biodiversity, forestry resources are not least declared common concern of mankind⁽¹³⁴⁾. International action remains confined to a matter of co-operation and, at least on paper, of equitable cost sharing⁽¹³⁵⁾.

In fact, and this appears even more clearly from the Final International Tropical Timber Agreement⁽¹³⁶⁾, the concern of industrial countries over the degradation of

and the Development of Forestry Plantations, concluded by Central American States in Guatemala, 29 October 1993. In other words, host States are ready for co-operation that fully respects their sovereignty over their natural resources; see for instance Delhi Declaration on Forests, adopted at the First Ministerial Conference of the Forestry Forum for Developing Countries, New Delhi, 3 September 1994; reproduced in 24 *EPL* (1994), 201.

Industrialised States insisted on introducing a clause securing the possibility to review the adequacy of the regime agreed, and keep forestry issues open for further discussion 'with regard to further international co-operation on forest issues'; preambular Para. (d); see also 1993 General Guidelines for the Sustainable Management of Forests in Europe, issued by the Helsinki Forest Meeting, 16-17 June 1993, point 16; reproduced at 23 *EPL* (1993), 232.

(132) 1992 Forestry Principles, Princ. 1(a) and 2(a); see also preambular Para. (h); see also 1994 Delhi Declaration on Forests, reiterating that «forest resources are an inalienable national resource»; Malaysia and Brazil had been particularly adamant on an express recognition of state sovereignty; see Eshbach, 'A Global Approach to the Protection of the Environment: Balancing State Sovereignty and Global Interests', 4 *Temple ICLJ* (1990), 271; Mickelson, 'Seeing the Forest, the Trees and the People: Coming to Terms with Developing Country Perspectives on the Proposed Global Forests Convention', in Canadian Council on International Law (ed.), *Global Forests and International Environmental Law*, *supra*, Chap. 6.

Industrialised States, whilst recognising the importance of national action, tried to circumscribe the sovereign power of State with reference to environmental requirements and general international law principles; see for example 1993 General Guidelines for the Sustainable Management of Forests in Europe; Brunnée, 'A conceptual Framework for an International Forests Convention: Customary Law and Emerging Principles', in Canadian Council on International Law (ed.), *Global Forests and International Environmental Law*, Chap. 2; Szekely, 'The Legal Protection of the World's Forests after Rio '92', in Campiglio, *et al.* (eds.), *The Environment after Rio, International Law and Economics*, (Graham & Trotman/Martinus Nijhoff, 1994), Chap. 6.

(133) Princ. 21 is restated in 1992 Forestry Principles, Princ. 1(a).

(134) On the contrary, the conservation of forests is declared to be of concern to 'the Governments of the countries to which they belong'; preambular Para. (f).

(135) Princ. 1(b).

(136) Finalised in 26 January 1994; 33 *ILM* (1994), 1016. The entry into force of the Agreement, made conditional upon ratification by 12 producer countries with a voting weight of 55%, and 16 countries with a minimum voting weight of 70%, and initially planned for the 25 February 1995, was hampered by the non ratification of key countries, including the US and Brazil. A group of 18 tropical timber producer States and equal number of importing countries agreed, at a UNCTAD meeting on 13 September 1996, to put the Agreement provisionally into force among themselves from the 1 January 1997; 'Tropical Timber Agreement: Soon in Force?', 26 *EPL* (1996), 246.

biodiversity in general, and more particularly the depletion of tropical rainforests, provided developing States with yet another opportunity to revive their old claims for a new international economic order, and obtain a series of concessions from developed States in exchange for their co-operation in global conservation efforts⁽¹³⁷⁾. Developed States have consistently reiterated their reticence to such claims through their opposition or interpretative declaration⁽¹³⁸⁾. This does but confirm in effect McNeely's comment⁽¹³⁹⁾, that States use and interpret sovereignty in this context only to preserve their own individual interests in the exploitation of natural resources.

The adoption of international rules to preserve or protect inherently 'transnational' (migratory or transboundary) resources, on the other hand, have raised no substantial issue under the principle of permanent sovereignty over natural resources. For instance, neither 1973 CITES, nor 1979 Bonn Convention on the Conservation of Migratory Species nor 1979 Bern Convention on the Conservation of European Wildlife expressly refer to the Contracting States' permanent sovereignty over their natural resources as such⁽¹⁴⁰⁾. On the contrary, they recognise that the various protected species «in their innumerable forms are irreplaceable part of the earth's natural system which must be conserved for the good of humankind»⁽¹⁴¹⁾.

In a similar fashion, the 1968 African Convention on Nature recognises that nature and natural resources constitute «a capital of vital importance to mankind» (preambular

(137) Extending from financial to technical assistance and equitable sharing of the benefits derived from the exploitation of the resources; see Humphreys, 'Hegemonic Ideology and the International Tropical Timber Organisation', at 217 *et sequ.* and 228 *et sequ.* Express referenceto a NIEO is made in the 1994 Tropical Timber International Agreement, preambular Para. 1. McConnell reports similar attempts throughout the 1992 Biodiversity negotiations, summarising the G77 negotiating line as: «We've got most of it: you want it; you'll have to pay for it»; *The Biodiversity Convention, a Negotiating History* (Kluwer Law International, 1996), at 76.

(138) To the noticeable exception of Nordic countries, which stress, in a joint declaration made in the context of the 1992 Biodiversity Convention, «the special obligations of developed countries to contribute financially and technologically to enable developing countries to fulfil their obligations under the Convention (...) A fair international burden sharing according to each country's means and needs is therefore absolutely crucial...». See however US Declaration, and joint Declaration of Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Italy, Japan, Malta, the Netherlands, New Zealand, Portugal, Spain, Switzerland, United Kingdom and United States (on financial mechanism); all declarations made at the Nairobi Final Act Conference are reproduced in full in McConnell, *supra* n. 137, Annex I (179 *et sequ.*). On the issue of financial and technological assistance and the respective positions of States: see *infra*, Chap. 5/3. The Parameters for Global Co-operation

(139) *Supra* n. 77.

(140) One should mention certain oblique references for instance in the Preamble of 1973 CITES, Para. 3 ('...their own wild fauna...').

(141) 1979 Bonn Convention on the Conservation of Migratory Species. 1979 Bern Convention on the Conservation of European Wildlife simply provides that wild flora and fauna constitutes 'a natural heritage' (Preamble).

Para. 1), yet contains no reference to permanent sovereignty over natural resources *per se*; neither does the 1985 ASEAN Agreement on the Conservation of Nature. More recently, the 1995 Straddling Fish Stocks Agreement, *ad Art. 3(3)*, makes only an indirect reference thereto, when it provides that a State shall pay due consideration to certain principles set forth in the agreement «[i]n the exercise of its sovereign rights for the purpose of exploring and exploiting, conserving and managing straddling fish stocks and highly migratory fish stock within areas under national jurisdiction».

Permanent sovereignty was not particularly at issue in any of the above conventions, as all were construed as a joined and mutual effort between host States, or international co-ordination of national actions to protect 'common' resources, implying no such substantial surrender or erosion of sovereignty as International action does. And despite US contentions in the Tuna/Dolphin II (Para. 3.21), none of the above agreements explicitly sanction *extraterritorial jurisdiction* of States Parties, even for the purpose of protection of the targeted species⁽¹⁴²⁾. On the contrary, and as the EC and Netherlands stressed rightly:

«The signatories merely promised to take conservation measures within their own jurisdiction, and to help the others to supervise and enforce the export licence system (...) that went with it. This [is] fundamentally different from a situation in which a country imposed import restrictions, not in order to help supervise and enforce the export licensing system or treaty partner which had agreed to take identical measures within its own jurisdiction, but to enforce measures it had established for conservation or protection outside its own jurisdiction and that other countries had not agreed to» (143).

No provision either is made in the 1995 Straddling Fish Stocks Agreement for the extraterritorial application of the coastal State fisheries conservation measures⁽¹⁴⁴⁾.

3. The Principle of Permanent Sovereignty over Natural Resources: a Principle of Customary Law

When it comes to evaluate the legal status of the principle of permanent sovereignty over natural resources, a careful distinction has to be drawn between (a) the classic components of the principle, as embodied in the 1962 landmark Resolution on

(142) In practice, both individual and collective sanctions have been used *inter alia* under the 1973 CITES, to encourage compliance with conventional obligations; see further Jenkins, 'Trade Sanctions: Effective Enforcement Tools', in Cameron *et al.* (eds.), *Improving Compliance with International Environmental Law* (Earthscan, 1996), Chap. 10, 225 *et sequ.* It remains to be seen, however, how far such sanctions can be considered as genuine extraterritorial measures, or constitute purely domestic measures with incidental extraterritorial implications as developed *supra* p. 78 (CR).

(143) Tuna/Dolphin II, at Para. 3.40.

(144) Davies & Redgwell, 'The International Legal Regulation of Straddling Fish Stocks', 67 *British YbIL* (1997), 199, at 268.

Sovereignty over Natural Resources and known as the ‘compromise solution’, and (b) the components developed subsequently. Whereas the former are well accepted under international customary law, the latter remain the object of serious controversy and have not yet reached such status.

Permanent sovereignty over natural resources, like the principle of self-determination it was initially related to, emerged as a purely political concept, prompted by political considerations, and invoked to achieve the essentially political goal of full-scale independence. Early claims of permanent sovereignty over natural resources and accompanying measures of nationalisation reflected political more than legal concerns: foreign companies' monopoly over the exploitation of mineral resources was increasingly assimilated to an unacceptable interference in the domestic affairs of the host State, most notably with its economic decision-making power, and hence constitutive of a threat to the national interest of that State. To justify the first wave of nationalisation in Iran, an Iranian delegate declared at an early meeting of the Second Committee of the General Assembly in charge of the issue: «[Iran's] very existence (...) has been threatened by the system [of monopoly by foreign owned enterprises, over the exploitation of Iran's natural resources] in force»⁽¹⁴⁵⁾.

The consensus expressed in the 1962 landmark Resolution on Sovereignty over Natural Resources and the related principles (*inter alia* nationalisation) was originally the result of a political compromise to solve a political issue⁽¹⁴⁶⁾, and «sovereignty over natural resources was therefore a political concept»⁽¹⁴⁷⁾. It is interesting to note nonetheless, that France, already at the stage of negotiations of the 1962 landmark Resolution on Sovereignty over Natural Resources, considered the issue of sovereignty over natural resources as a legal issue, and indeed opposed the adoption of the resolution on the ground that such issue had to be dealt with by lawyers before being consecrated into a (political) resolution of UN General Assembly ⁽¹⁴⁸⁾. By contrast, some countries, mostly former colonial powers, such as the UK and the Netherlands,

(145) Quoted after Rajan, *Sovereignty over Natural Resources*, at 53. The Anglo-Iranian Oil Company had indeed exercised strong pressures on the Iranian government to preserve its monopolistic situation and favour its economic and commercial interest; Rosenberg, *Le Principe de souveraineté des États sur leurs ressources naturelles*, 95 *et sequ.* On the same line, the Chilean delegate emphasised, at a subsequent meeting of the same committee, that the issue at stake -sovereign economic decision-taking- was a ‘highly political one’; Rajan, *ibid.*, 58, and similar position of other developed and developing and socialist States at 51 *et sequ.*; see further Fischer, ‘La souveraineté sur les ressources naturelles’.

(146) Fischer, ‘La souveraineté sur les ressources naturelles’, at 527.

(147) Declaration of the Swedish delegate to the Second Committee, quoted after Rajan, *Sovereignty over Natural Resources*, at 89.

(148) Fischer, ‘La souveraineté sur les ressources naturelles’, at 518.

but also the US and Australia, first opposed the draft of common Article 1 of the 1966 International Covenants when put to a vote at the Third Committee of the General Assembly in 1955, on the ground that the principle was a political and not a legal one, and hence not worthy of being enshrined in an international legal document⁽¹⁴⁹⁾.

Nevertheless, the 1962 compromise formula of permanent sovereignty over natural resources has been constantly reiterated in a considerable number of non-binding⁽¹⁵⁰⁾ and binding regional⁽¹⁵¹⁾ and international⁽¹⁵²⁾ legal documents, and has thereby

(149) For a detailed review of the debate in the Third Committee: Hyde, 'Permanent Sovereignty over Natural Wealth and Resources', 50 *AJIL* (1956), 854. See also Cassese, 'The Self-Determination of Peoples', in Henkin (ed.), *The International Bill of Rights: The Covenant on Civil and Political Rights*, Chap. 4.

Likewise, occidental States regarded UNGA, A/Res./626 (VII), 21 December 1952, on the Right to Exploit Freely Natural Wealth Resources, as a pure political document deprived of any legally binding effect; Rosenberg, *Le Principe de souveraineté des États sur leurs ressources naturelles*, 103 *et sequ.*, 119 *et sequ.* It has yet to be emphasised however, that the opposition of occidental States was essentially motivated by political rather than grounds, both during the negotiations of the 1962 landmark Resolution on Sovereignty over Natural Resources, and the drafting stage of the 1966 Covenants; this factor might, in some respect, play in favour of the legal existence of the principle:

(a) some developing States feared that an 'internationalisation' of permanent sovereignty over natural resources and correlated right to nationalise would weaken or cast some doubt on the existence of, or impose constraints to the exercise of this unlimited prerogative inherent in the sovereignty of any states; see Mexico, Saudi Arabia, in Rajan, *Sovereignty over Natural Resources*, 82 *et sequ.*

(b) developed States on the other hand, would not even try to contest the principle of sovereignty over natural resources itself, but battled exclusively on economic grounds, to preserve at least their vested economic interests, secure their future interest, and preserve a safety of transactions (against arbitrary nationalisation) and freely accepted co-operation on economic terms. See De Waart, 'Permanent Sovereignty over Natural Resources as a Cornerstone for International Economic Rights and Duties'; Brownlie, 'Legal Status of Natural Resources in International Law', 262 *et sequ.*; Rajan, *Sovereignty over Natural Resources*, Chap. 4.

(150) See for instance A/Res./2692 (XXV), 11 December 1970, on Permanent Sovereignty over Natural Resources of Developing Countries; 1972 Stockholm Action Plan for the Human Environment, Recommend. 51(a); 1972 Stockholm Declaration on the Human Environment, Princ. 21; A/Res./3016 (XXVII), 18 December 1972, on Permanent Sovereignty over Natural Resources of Developing Countries; A/Res./3037 (XXVII), 19 December 1972, on a Charter on Economic Rights and Duties of States; A/Res./3171 (XXVIII), 17 December 1973, on Permanent Sovereignty over Natural Resources; A/Res./3175 (XXVIII), 17 December 1973; A/Res./3167 (XXVIII), 17 December 1973; 1982 World Charter for Nature, Para. 22; 1986 Declaration on the Right to Development, preambular Para. 7; 1989 Amazon Declaration, Para. 4.

The principle was consistently reaffirmed in the process running up to 1992 UNCED; see 1990 Bangkok Ministerial Declaration on Sustainable Development, Para. 18; 1989 Brazilia Declaration on the Environment, Para. 2; Kampala Declaration on Sustainable Development in Africa; 1989 Resolution 44/228, on United Nations Conference on Environment and Development, Para. 7. The lack of reference to the principle in the 1990 Bergen Ministerial Declaration on Sustainable Development reflects the fact that sovereignty over natural resources is perceived less as an issue by European and North American States; but the principle was endorsed in the 1975 Final Act of CSCE (Sovereign equality, respect for the rights inherent in sovereignty), and was reiterated in the 1983 Madrid Concluding Document on CSCE Second Follow-up Meeting (Co-operation in the field of economics, of science and technology and of the environment).

(151) See for instance the 1994 European Energy Charter, Para. 43; 1981 African Charter on Human and Peoples' Rights, Art. 21(1); 1986 Noumea Convention on the Environment in the South Pacific, Art. (continued)

crystallised into a legal principle, and legal right⁽¹⁵³⁾. As early as in the early 1970s, the Under Secretary-General for Economic and Social Affairs, declared:

«[t]he principle of national sovereignty over natural resources has been proclaimed so frequently and solemnly that it has by now acquired the weight of a [UN] Charter principle»⁽¹⁵⁴⁾

The 1962 landmark Resolution on Sovereignty over Natural Resources was treated, by various International Arbitral Tribunals, as declaratory of international customary law⁽¹⁵⁵⁾. In the *Topco* case, the Arbitrator Dupuy found that the fact that a majority of developing and developed States, representative of various political and economic systems, including the US had voted in favour the resolution, «indicates without the slightest doubt universal recognition of the rules therein incorporated», which constitutes an *opinio juris communis*⁽¹⁵⁶⁾.

The doctrine is almost unanimous⁽¹⁵⁷⁾ that the principle of permanent sovereignty over natural resources as enshrined in the 1962 landmark Resolution on Sovereignty

4(6); 1978 Amazon Treaty, Art. IV; 1981 Lima Convention on the Marine Environment in the South-East Pacific, Art. 3(5).

(152) 1971 Ramsar Convention, Art. 2(3); Vienna Conventions on Succession of States in respect of Treaties (1978) and in respect of State Property, Archives and Debts (1983); 1982 UNCLOS, Art. 193; 1989 Basel Convention on Transboundary Movement of Hazardous Wastes, Preamble; 1992 Climate Change Convention, Preamble; 1992 Biodiversity Convention, Art. 15(1); 1994 Tropical Timber International Agreement, Art. 1.

(153) Cassese, *International Law in a Divided World*, Paras. 80 *et sequ.*; Brownlie, *Principles*, 595 *et sequ.*; permanent sovereignty over natural resources was already associated with right to nationalise and right to self-determination in early resolutions, first in UNGA, A/Res./1515 (XV), 15 December 1960, and then in 1962 landmark Resolution on Sovereignty over Natural Resources.

(154) Quoted after Rajan, *Sovereignty over Natural Resources*, at 27.

(155) Reference *supra* n. 9.

(156) 17 *ILM* (1978), 1, Paras. 87; also *BP* case, *supra*. Besides, the 'reservations' entered by most industrial States on the 1974 NIEO Declaration, whereby they regret the non reproduction of the consensus reached in 1962, in effect reinforced the value of 1962 landmark Resolution on Sovereignty over Natural Resources; see text of reservations in 13 *ILM* (1974), 744, and US Ambassador Scali's statement at 70 *Department of State Bulletin* (1974), No. 1822, 569; on the value of such reservations, see *supra* Chap. 1/2/iii. Legal Framework. It is usually recognised that the consensus was not affected by the abstentions *en bloc* of socialist States, on the ground that such opposition was essentially ideological but did not concern the principle of sovereignty as such. This has been confirmed by the subsequent adherence of these countries to binding and non-binding documents referring to sovereignty over natural resources as defined in 1962; Rosenberg, *Le Principe de souveraineté des États sur leurs ressources naturelles*, 215.

(157) See however: O'Keefe, 'The United Nations and Permanent Sovereignty over Natural Resources', 8 *JWTL* (1974), 239, at 245; in a critique of the 1962 landmark Resolution on Sovereignty over Natural Resources, the author argues that the concept of permanent sovereignty over natural resources «is of highly dubious legal content, representing an attempt to give legal force and validity to what is essentially a political goal». Elian considers that the principle «is a notion of political as well as juridical nature»; *The Principle of Permanent Sovereignty over Natural Resources*, at 11. Fischer sees the resolution not as a legal document, but as the endorsement of a doctrine by a political organ; 'La (continued)

over Natural Resources constitutes a cornerstone of environmental and developmental law declarative of international customary law⁽¹⁵⁸⁾. Some authors even argue that sovereignty over natural resources is a peremptory rule of international law, or at least a candidate rule⁽¹⁵⁹⁾, owed to the international community as a whole and which cannot be derogated or alienated⁽¹⁶⁰⁾.

souveraineté sur les ressources naturelles', at 527. Likewise, Guess denies any legal validity to the resolution on its own under international law, but recognises that it restates basic principles and modalities of the exercise of permanent sovereignty over natural resources; 'Permanent Sovereignty over Natural Resources', at 411 and 414.

(158) Cassese for example, considers that although 1962 landmark Resolution on Sovereignty over Natural Resources cannot be regarded *per se* as declaratory of customary law «nor can it be argued that it has gradually turned into a corpus of customary rules (...) the Declaration [on Sovereignty over Natural Resources] can now be regarded as sanctioning general international law»; *Self-Determination of People: A Legal Reappraisal*, at 100. Schrijver fully recognises the customary nature of the compromise formula of Sovereignty over Natural Resources, yet expresses serious doubt about its qualification for a peremptory norm; 'Permanent Sovereignty over Natural Resources versus the Common Heritage of Mankind', in de Waart et al. (eds.), *International Law and Development* (Martinus Nijhoff, 1988), 87, at 91 *et sequ.* Rajan seems to recognise a certain value to the 1962 landmark Resolution on Sovereignty over Natural Resources, and although he admits that UNGA resolutions are not binding *per se*, he still considers that «[t]hey have at least a probative value as the only statement of *legal* principles supported by a large section of the world community»; *Sovereignty over Natural Resources*, at 130 (emphasis added); see also at 122-23; adopting a similar approach, Birnie & Boyle acknowledge that «[w]hilst not *per se* binding, [1962 landmark Resolution on Sovereignty over Natural Resources] had considerable effect on the development of international law», although they do not expressly recognise its customary character, at 113; Birnie tends to do so in her contribution on 'International Environmental Law: its Adequacy for Present and Future Needs', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 2. The decisive role of the 1962 landmark Resolution on Sovereignty over Natural Resources in the recognition and codification of a new principle of international law is also acknowledged by Rosenberg, although the author refuses to see in that resolution a definitive statement of sovereignty of the law. On the contrary, he suggests that the consensus reached in the above resolution was purely instantaneous, hence subject to further and constant evolution; *Le Principe de souveraineté des États sur leurs ressources naturelles*, 224. See also Beck, *Die Differenzierung von Rechtspflichten in den Beziehungen zwischen Industrie- und Entwicklungsländern. Eine völkerrechtliche Untersuchung für die Bereiche des internationalen Wirtschafts-, Arbeits- und Umweltrechts* (Peter Lang, 1994), at 184; Brownlie, *Principles*, 15; Flory, *Droit international du développement* (PUF, 1977), 282; Handl, 'Territorial Sovereignty and the Problem of Transfrontier Pollution, 69 *AJIL* (1975), 58; Pineschi, 'The Antarctic Treaty System and General Rules of International Environmental Law', in Francioni & Scovazzi (eds.), *International Law for Antarctica* (Giuffrè, 1987), 187; Sands, *Principles* (Vol. I), 187 *et sequ.*

(159) Brownlie, 'Legal Status of Natural Resources in International Law', 294; *Principles*, 513.

(160) In the sense of 1969 Vienna Convention on the Law of Treaties, Art. 53. See Jimenez de Arechaga, 'International Law in the Past Third of a Century', 159 *RdC* (1978-I), 297. Cassese admitted that the right of self-determination was probably part of the *ius cogens*, yet only to the extent it is reflected in the 1970 Declaration on Friendly Relations, construed more narrowly than under the 1966 International Covenants, and excluding *inter alia* permanent sovereignty over natural resources; 'The Self-Determination of People', in Henkin (ed.), *The International Bill of Rights: The Covenant on Civil and Political Rights*, Chap. 4, at 111. See also Hannikainen, *Peremptory Norms (Jus Cogens) in International Law* (Lakimiesliiton Kustannus, 1988), 378-379; Hossain, 'Permanent Sovereignty over Natural Resources', in Hossain (ed.), *Legal Aspects of the New International Economic Order* (Frances Pinter/Nichols Publishing Company, 1980), at 39; Subrata Roy Chowdhury, 'Permanent Sovereignty Over Natural Resources' in Hossain and Chowdhury (eds.), *Permanent Sovereignty Over Natural Resources*, Chap. 1, at 57. Self-determination is not however mentioned in Whiteman's projected list of *ius cogens* norms; 'Jus Cogens in International Law, with a Projected List', 7 *Georgia JICL* (1977), 609.
(continued)

On the other hand, any attempts to stretch permanent sovereignty over natural resources beyond the control over natural wealth and resources, most notably in the 1975 Economic Charter, have largely remained political claims *de lege ferenda*⁽¹⁶¹⁾, supported only by some States, openly and consistently opposed by many other States⁽¹⁶²⁾. Likewise, any attempt to erode or intrude permanent sovereignty over natural resources for the sake of the common benefit of mankind is closer to ideology, than to reality.

4. Permanent Sovereignty over Natural Resources: Limits and Constraints

i. Classic Conception of Absolute and Unlimited Sovereignty

Like the international political system it evolved in, the management and protection of environmental resources was, and still is, essentially grounded in, and organised around the Westphalian legal concept of state sovereignty and territorial integrity⁽¹⁶³⁾. The principle of ‘full and absolute territorial jurisdiction (...) of every sovereign’⁽¹⁶⁴⁾ meant, *inter alia*, that the environment was considered to be ‘partie intégrante’ of the state assets, and environmental issues (as far as environment was treated as an issue) a matter of domestic affairs over which, in the name of the non-interference principle,

A certain number of countries, such as Algeria, Libya and Kuwait have openly endorsed the thesis of permanent sovereignty over natural resources as a principle of *ius cogens*; see *Topco* case, *supra* n. 9. The practical utility of the qualification of *ius cogens* remains very disputed in the doctrine however; see most notably Schwarzenberger, ‘International *Jus Cogens* ?’, 43 *Texas LR* (1969), 455; Weil, ‘Towards Relative Normativity in International Law ?’ 77 *AJIL* (1983), 413.

(161) See *contra*, *Quoc Dinh: Droit International Public*, § 310; the authors seem to admit that the customary principle of permanent sovereignty over natural resources includes sovereignty over economic resources. Similar view was taken by Jimenez de Arechaga, ‘International Law in the Past Third of a Century’, 159 *RdC* (1978-I), 297.

(162) Dupuy, having carefully considered the voting records of a series of resolutions trying to alter the consensus formula of permanent sovereignty, *inter alia* in the 1975 Economic Charter, reached the conclusion that Art. 2 of the Economic Charter «must be analysed as a political rather than as a legal declaration», introducing new principles on which there is no *opinio juris communis*; *Topco* case, *supra* n. 9, Para. 88.

(163) Haas & Sundgren, ‘Evolving International Environmental Law: Changing Practices of National Sovereignty’, in Choucri (ed.), *Global Accord* (MIT, 1993), Chap. 12. See for instance, the Montevideo Convention on the Rights and Duties of States, adopted by the 7th International Conference of American States provides that «[n]o state has the right to intervene in the international or external affairs of another» (Article 8); 26 December 1933, in force 26 December 1934, 165 LNTS 19; reproduced in 28 *AJIL* (1934), *Suppl.*, 75; 15 Latin American States and the US are party; the Convention is generally regarded as reflecting customary International law on statehood requirements; Harris, *Cases & Materials*, at 102.

(164) See US Supreme Court’s landmark decision in *The Schooner “Exchange” v. McFaddon and others*, 11 US 116 (1812), 137.

other States had no 'droit de regard'⁽¹⁶⁵⁾. The so-called Harmon doctrine is often quoted in this context, as a statement of absolute sovereignty over transnational waters⁽¹⁶⁶⁾.

Regarding the putative Mexican right to an indemnity for the harm suffered in connection with the diversion of the waters of the Rio Grande within the US territory for irrigation purposes, the United States Attorney-General Harmon, inspired by the *Schooner "Exchange"* precedent, concluded:

«the rules, principles, and precedents of international law impose no liability or obligation [on the US for the effects of the diversion of waters on its own territories]⁽¹⁶⁷⁾.

The Harmon doctrine had been invoked by a number of States apart from the US⁽¹⁶⁸⁾, and was held as an expression of the rule concerning the uses of transnational

⁽¹⁶⁵⁾ Wolfrum, 'Die grenzüberschreitende Luftverschmutzung im Schnittpunkt von nationalem Recht und Völkerrecht', 99 *DVBl.* (1984), 492, at 494-495; also Bousek, 'Ein Beitrag zum internationalen Wasserrecht', 7 *Zeitschrift für Völkerrecht* (1913), 39, at 21.

⁽¹⁶⁶⁾ Lammers, *Pollution of International Watercourses* (Martinus Nijhoff, 1984), 268 *et sequ.* Generally on the Harmon doctrine: Austin, 'Canadian-United States Practice and Theory Respecting the International Law of International Rivers: A Study of the History and Influence of the Harmon Doctrine', 37 *Can. Bar Rev.* (1959), 393; McCaffrey, 'The Harmon Doctrine One Hundred Years Later. Buried, Not Praised', 36 *Natural Resources Journal* (1996), 725. Some authors however, question that, by this famous *dicta*, Attorney-General Harmon intended to affirm the absolute and automatic legality of any action of a State in relation to its territory, and suggest on the contrary, that Harmon «se bornait à soutenir qu'un certain usage des eaux et certaines conséquences n'étaient pas réglés en droit international et impliquaient une confrontation directe des souverainetés»; Florio, 'Sur l'utilisation des eaux non maritimes en droit international', in Blumenwitz & Randelzhofer (eds.), *Festschrift für Friedrich Berber* (C.H.Beck, 1973), 151, at 153.

⁽¹⁶⁷⁾ Moore, I *International Law Digest* (1906), 654; also Deener, *The United States Attorneys General and International Law* (Martinus Nijhoff, 1957), 254.

⁽¹⁶⁸⁾ India relied on the doctrine in its dispute with Pakistan over the waters of the River Indus; Berber, 'The Indus Water Dispute', 6 *Indian YbIA* (1957), 46; Lammers, *Pollution of International Watercourses* (Martinus Nijhoff, 1984), 308 *et sequ.*; McCaffrey, 'Second Report on the Law of the non-navigational uses of international watercourses, 1986 *YbILC* Vol. II Part 1, 87, at Paras. 88 *et sequ.* Although it is not clear how long India had effectively endorsed the doctrine, it is usually admitted that it had definitely abandoned it when signing the five-year 1977 Agreement on Sharing of the Ganges Waters; Lammers, *Pollution of International Watercourses* (Nijhoff, 1984), at 319. The Memorandum of Understanding between Bangladesh and India (1983-1984) was also geared towards the optimum utilisation of the Ganges water; see Asafuddowlah, 'Sharing of Transboundary Rivers: The Ganges Tragedy', in Blake *et al.* (eds.), *The Peaceful Management of Transboundary Resources* (Graham & Trotman/Martinus Nijhoff, 1995), Chap. 15. A new 30-year accord was finally signed between the two countries in December 1996, settling the dispute on the sharing of Ganges waters, whereby each Parties resolves to equitably share the 'burden of water shortage'; *The Indian Express*, 13 December 1996 [posted on Express India Website @ <<http://www.expressindia.com/ie/daily>>; see also Sands' Introductory Note to the Treaty in 36 *ILM* (1997), 519. Under the Agreement, explicitly guided by the principles of equity, fairness and no harm to either party (Art. IX) and mutual accommodation (Preamble, Para. 4) each country will receive a guaranteed quantum of 35.000 cu/sec. of water during the period of the worst days of lean rains spell. The Treaty on Sharing of the Ganges at Farakka, which entered into effect on 1 January 1997, has already given ground to an official complaint from Bangladesh for India's failure to abide by the terms of the treaty, and realise the agreed amount of water from the Farakka barrage, West Bengal; *The Indian Express*, 4 April 1997.

(continued)

waters by part of the doctrine at the time⁽¹⁶⁹⁾; nevertheless, state practice casts serious doubt about the Harmon doctrine as the expression of international river law, and indicates indeed that it was, and has remained, an essentially political doctrine⁽¹⁷⁰⁾.

First, the Harmon doctrine has never been considered by States as the mandatory rule for transnational waters and applied consistently in this title. Rather, States tended to support the doctrine when upstream⁽¹⁷¹⁾, while they would dismiss it when downstream⁽¹⁷²⁾. The Harmon doctrine had even less currency in Europe, which tends to confirm the lack of *international* recognition⁽¹⁷³⁾.

Furthermore, in practice, in spite of their alleged and theoretical sovereign prerogatives, States have often entered into prior agreements with the potentially affected State(s) to regulate the intended diversion of waters flowing across their territory⁽¹⁷⁴⁾. Likewise, the majority of disputes arising out of the utilisation of transnational waters, even where the doctrine was invoked, have often been resolved by

Likewise, the Austrian government's position in the negotiations with Bavaria over the shared water resources reflected, in some respects, the Harmon doctrine; reported in 1986 *YbILC* Vol. II Pt. 1, 87, at Paras. 90 *et sequ.* See also the decision of the Imperial Royal Administrative Court of Austria in 1913, regarding the question of territorial rights over a river flowing into a lower-lying State; translation in 7 *AJIL* (1913) 653, at 658.

To a certain extent, Canada availed itself of the doctrine in the context of a dispute with the United States over the exploitation of Columbia River; Bourne, 'The Right to Utilize the Water of International Rivers', 3 *Canadian YbIL* (1965), 187, at 205 *et sequ.*

(169) See for instance Bains, 'The Diversion of International Rivers', 1 *Indian JIL* (1960-61), 38; Berber, *Rivers in International Law* (Stevens & Sons, 1959), 14 *et sequ.*; Bousek, *ibid. supra* n. 165; Briggs, *The Law of Nations*, 2nd edn (Stevens, 1953), 274; Fenwick, *International Law* (3rd edn, Appleton, 1948), 391; Hyde, *International Law as Chiefly as Interpreted and Applied by the United States*, 2nd edn, Vol. 1 (Little Brown & Company, 1951), 565 *et sequ.*; MacKay, 'The International Joint Commission between the United States and Canada', 22 *AJIL* (1928), 292.

(170) Bourne, 'The Right to Utilize the Water of International Rivers', at 204; Hohmann, *Precautionary Legal Duties and Principles of Modern International Environmental Law* (Graham, Trotman & Nijhoff, 1994) at 15; Lipper, 'Equitable Utilization', in Garretson *et al.* (eds.) *The Law of International Drainage Basins* (Oceana, 1967), Chap. 2, at 22-23.

(171) Like the US, India, Austria and Canada; *supra* n. 168.

(172) Even the US, at the source of the doctrine, objected to it in the dispute with Canada over the diversion of the Columbia River in Canada. The US relied on the very same grounds which Mexico had invoked previously, namely the application of the equitable apportionment principle (then strongly resisted by the US, *supra* n. 167). The US memorandum argued that such principle had been 'solidified in international law as it has developed in the previous years'; Arsanjani, *International Regulation of Internal Resources* (University Press of Virginia, 1981), 89; reported in 1986 *YbILC* Vol. II Pt. 1, 87, at Paras. 90 *et sequ.*; Bourne, 'The Columbia River Controversy', 37 *Can. Bar Rev.* (1959), 444; Austin, 'Canadian-United States Practice and Theory Respecting the International Law of International Rivers: A Study of the History and Influence of the Harmon Doctrine', 411 *et sequ.*

(173) Birnie & Boyle, 219; Cohen, 'The Régime of Boundary Waters - the Canadian-United States Experience', 146 *RdC* (III-1975), 219, at 229 *et sequ.*; McCaffrey, *YbILC* Vol. II Pt. 1, 105 *et sequ.*

(174) Hyde, *ibid. supra* n. 169, at 565 *et sequ.*

means of treaties or agreements providing for the equitable utilisation of waters⁽¹⁷⁵⁾.

At the other extreme, some authors have suggested a doctrine of exclusive and absolute territorial integrity, whereby «Jeder Staat muss Flüssen, über die er nicht, sei es in ihrer Länge, sei es in ihrer Breite, die unbeschränkte Gebietshoheit ausübt, ihren natürlichen Lauf lassen»⁽¹⁷⁶⁾. Paradoxically, a similar argument was invoked by the 'founder country' of the Harmon doctrine in its memorandum in the *Trail Smelter* arbitration. The US legal adviser hence declared it a fundamental principle of the law of nations that «a sovereign state is supreme within its own territorial domain and that it and its nationals are entitled to use and enjoy their territory and property without interference from an outside source»⁽¹⁷⁷⁾.

Both 'absolutist' doctrines were overruled in early national and international case-law, and dismissed by an overwhelming part of the contemporaneous doctrine, and by influential bodies in the international law-making process. They have been substituted by a more moderate and realistic conception of restricted territorial sovereignty and integrity.

(175) See among others the Water Treaties concluded between Mexico and the US: 1906 Convention on the Distribution of Waters of Rio Grande, and 1944 Convention on the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande; both treaties are reproduced in Bevens (ed.), *Treaties and Other International Agreements of the United States of America 1776-1949* Vol. 9, 924 and 1166. See also: 1960 Indus Waters Treaty, between India and Pakistan, 419 UNTS 125; reproduced in 1 *Indian JIL* (1960-1961), 341. It must be said however, that 1906 Treaty between Mexico and US (Art. V), the 1960 Indus Waters Treaty (Art. 11(2)), and the 1996 Treaty on Sharing of the Ganges Waters at Farakka (preamble Para. 5) expressly provided that they were not constitutive of new legal rules of binding precedents; Bourne, 'The Right to Utilize the Water of International Rivers', 204-205; Lammers, *Pollution of International Watercourses*, 267 *et sequ.* and 308 *et sequ.* See further the agreements surveyed by Schwebel, 'Third Report on the Law of the non-navigational uses of international watercourses', A/CN.4/348, 11 December 1981, 1982 *YbILC* Vol. II Part 1, 65, Paras. 49 *et sequ.*; and survey of bilateral and multilateral treaties in Secretary General Report on the Legal Problems Relating to the Utilization and Use of International Rivers, Doc. A/5409, 1974 *YbILC* Vol. II, Pt. 2, 33, at 57 *et sequ.* and supplementary Report Doc. A/CN.4/274, *ibid.*, at 289 *et sequ.*

(176) Huber, 'Ein Beitrag zur Lehre von der Gebietshoheit an Grenzflüssen', 1 *Zeitschrift für Völkerrecht und Bundesstaatsrecht* (1907), 29 *et sequ.*, and 159 *et sequ.*, at 160. Although Huber's essay was concerned with intra-national dispute between two Swiss cantons (Zürich and Schaffhausen) over the utilisation of the Rhine, he is usually attributed the same position with respect to inter-states rivers; Berber, *supra* n.169, at 19-20. Reid drawing an analogy with private domestic law, held that any obligation of a State linked to the permanent exclusive exploitation of its natural resources has the character of a *servitude*; 'Servitudes Internationales', 45 *RdC* (1933-III), 1, Chap. II.

(177) Memorandum in relation to the arbitration of the *Trail Smelter* case (US v. Canada), 10 August 1937, reproduced in full in 5 *Whiteman's Digest*, at 183; referred after McCaffrey, 'The Harmon Doctrine One Hundred Years Later. Buried, Not Praised', 36 *Natural Resources Journal* (1996), 725, at 758. Australia's argument of a 'decisional sovereignty' in the *Nuclear Tests* case was also close to a restatement of absolute territorial integrity; *ICJ Pleadings, Nuclear Tests 1974*, Vol. I, at 188.

ii. Towards a Limited Sovereignty over Natural Resources

Although *per definitionem* territorially limited⁽¹⁷⁸⁾, sovereignty entails, in its relations to a given territory, a *prima facie* exclusive jurisdiction «in regard to portion of the globe» and involves «an exclusive right to display the activities of a State»⁽¹⁷⁹⁾. Nevertheless, it is no longer disputed that to the sovereign territorial jurisdiction of a State correspond certain sovereign responsibilities correspond, namely: (a) not to interfere, directly or indirectly, with other States equal prerogatives over their respective territories⁽¹⁸⁰⁾, and (b) to protect «the rights which each State may claim for its nationals in foreign territory»⁽¹⁸¹⁾.

Permanent sovereignty over natural resources, as the prime manifestation of sovereign territorial jurisdiction, secures a *prima facie* exclusive jurisdiction over the resources located in, above or under the *national* territory. The sovereign equality and equal sovereignty of other States on the other hand, implies a sovereign responsibility for each State (a) not to intervene (directly) in areas under the territorial jurisdiction of other sovereign States, or use its sovereignty in a way that would hamper or adversely affect the sovereignty of other States, and (b) to preserve the legitimate rights acquired by foreign nationals over its portion of territory.

Apart from the restrictions inherent in the territorial limits of state jurisdiction, a number of more controversial restrictions related to the substance of sovereignty have emerged over the past two decades as the result of the development of international law and the rapid development of international environmental law⁽¹⁸²⁾.

(178) Acting as arbitrator in the *North Atlantic Coast Fisheries* dispute (UK v. US), the PCIJ stated that «one of the essential elements of sovereignty is that it is to be exercised within territorial limits...»; 11 *RIAA* (1910), 167, at 180.

(179) *Island of Palmas* arbitration (Netherlands-US), II *RIAA* (1928), 829, at 838-839; also: 1970 Declaration on Friendly Relations. See further Brownlie, *Principles*, 287; Wolfrum, *supra* n. 165, at 494.

(180) Wolfrum, *supra* n. 165, at 494; also Epiney, 'Das "Verbot erheblicher grenzüberschreitender Umweltbeeinträchtigungen" : Relikt oder konkretisierungsfähige Grundnorm ?', 33 *AVR* (1995), 309, at 321.

(181) *Island of Palmas* arbitration, *supra* n. 179, at 839.

(182) See Bedjaoui, 'Remanences de théories sur la "souveraineté limitée" sur les ressources naturelles', in Gutiérrez Girardot *et al.* (eds.), *New Directions in International Law, Essays in Honour of Wolfgang Abendroth, Festschrift zu seinem 75. Geburtstag* (Campus, 1982), 63.

a. *Equitable Utilisation, Sic Utere Tuo and Related No Substantial Transboundary Harm Principles*

The first radical move away from the doctrine of absolute sovereignty over natural resources and absolute integrity obeyed practical imperatives of coexistence and good neighbourliness between equal, sovereign yet interdependent States with respect to the use of certain shared resources, most notably transboundary waters. *De facto*, the equal and common, indeed interdependent, interests of riparian States⁽¹⁸³⁾ command each of them to use that portion of water flowing through its territory in an equitable and considerate way, and to refrain from using its own prerogatives in a way that would substantially encroach upon the equal prerogatives of other riparian States (limited sovereignty)⁽¹⁸⁴⁾. On the other hand, States must tolerate the unavoidable infringement of the prerogatives incidental to a normal and diligent use of the shared resources by other riparian States (limited integrity)⁽¹⁸⁵⁾.

(183) The concept of 'community of interest of riparian States' constitutes «the basis of a common legal right, the essential features of which are the perfect equality of all riparian States in the user of the whole course of the river and the exclusion of any preferential privilege of any one riparian States in relation to the others»; *Case Relating to the Territorial Jurisdiction of the International Commission of the River Oder*, PCIJ Ser. A-No 23, at 27. In *The Diversion of Water from the Meuse*, the Court dismissed the implied contention of the Netherlands that the Treaty concerning the regime of diversions of water from the Meuse, concluded with Belgium in 1863, «invests either Contracting Party with a right of control the other party might not exercise» hence creating a situation of inequality between the Parties. Rather, the Court held that the actual purpose of the Treaty was to «reconcile [the practical interests of the Contracting Parties] with a view to improving an existing situation»; PCIJ Ser. A/B, Fascicule No 70, Judgment of June 28th, 1937, at 19-20. The community and equality of interest approach had been equally endorsed by domestic courts in the US, Switzerland, German and India to resolve disputes between States, Cantons, Länder and Provinces; see *supra* n. 176 and *infra* n. 200. Further references in Lammers, *Pollution of International Watercourses*, 397 *et sequ.*; Hohmann, *Precautionary Legal Duties and Principles of Modern International Environmental Law* (Graham & Trotman/Martinus Nijhoff, 1994), 18-19; Bourne, 'The Right to Utilize the Water of International Rivers', at 211 *et sequ.* As we shall see, the approach is also central in the 1966 ILA Helsinki Rules on the Use of Waters of International Rivers and ILC's drafting process on the non navigational use of transboundary watercourses; *infra* p. 99 *et sequ.*

(184) Otherwise referred to as the *sic utere tuo ut alienum non laedas* principle; see Texte des Résolutions adoptées à Session de Madrid, 1911, en ce qui concerne la Réglementation internationale de l'usage des cours d'eau internationaux, in 24 *Ann.IDI* (1911), 365-366. Notwithstanding its Latin name, the principle draw its origins in the Common law, and not in Roman law, as sometimes argued; see Hinds, 'Das Prinzip 'sic utere tuo ut alienum non laedas' und seine Bedeutung im internationalen Umweltrecht', 30 *AVR* (1992), 298, at 301; Florio, 'Nota sull' inquinamento delle acque non marittime nel diritto internazionale', 46 *Rivista di Diritto Internazionale* (1963), 588; see *contra* Kiss, 'Abuse of Rights', in Bernhardt (ed.), *Encyclopedia of Public International Law*, Instal. 7 (North-Holland, 1984), 1. The principle was subsequently endorsed in civil law systems, as illustrated from its application to inter-cantons and inter-Länder disputes in Switzerland and Germany; *supra* n. 183. On the importance of the principle in international environmental law, see Epiney, *supra* n. 180; Hinds, *supra* *ibid.*

(185) The qualification of the interference was omitted in 1972 Stockholm Declaration, Princ. 2, and, consequently, any generalisation of a duty of prevention confined to qualified harm/risk has remained largely controversial; it is well accepted however, that *de minimis* harm fall outside the material field of (*continued*)

The work of the IDI, the ILA and the ILC on the non navigational use of international waters played a decisive role in the departure from the doctrine of absolute sovereignty and integrity and the elaboration of a regime based on equitable apportionment (balancing of interests), maximum beneficial utilisation, and reasonable diligence⁽¹⁸⁶⁾. In 1911 already, the Institut de Droit International, officially departed from the absolute sovereignty/integrity doctrine on the grounds that:

«[I]es Etats riverains d'un même cours d'eau sont, les uns vis-à-vis des autres, dans une dépendance physique permanente qui exclut l'idée d'une entière autonomie de chacun d'eux sur la section de la voie naturelle relevant de sa souveraineté.»⁽¹⁸⁷⁾

The ILA is more particularly accountable for the development of the equitable utilisation principle. In 1956, the Association issued a set of Principles of the Law Governing the Uses of the Waters of International Rivers, stating an obligation of *due consideration* (*Rücksichtnahmegebot*) for other riparian States' interests, and the equitable apportionment principle⁽¹⁸⁸⁾. These Principles were elaborated further in the 1966 ILA Helsinki Rules on the Use of Waters of International Rivers (1966 ILA Helsinki Rules), more particularly Arts. IV-XI (equitable utilisation of the waters of an international drainage basin), and were consistently reaffirmed in subsequent ILA draft Articles on international waters and transboundary pollution⁽¹⁸⁹⁾.

application of the prevention and precaution; 1978 UNEP Draft Principles on Shared Natural Resources; according to the appended definition, the expression 'significantly affect' refers to any appreciable effect on a shared natural resources and excludes 'de minimis' effects; Birnie & Boyle, 98-99; also: 1996 ILC Draft Articles on International Liability (Art. 2(a)). See further *infra*, Precautionary Principle, Constitutive Elements of Precautionary Principle: Risk/Harm to be Averted/Minimised.

(186) Equitable apportionment and utilisation are of less direct relevance in relation to the navigational use of watercourses in the sense that such use does not affect as significantly as non-navigational use does, the quantity, the flow and quality of water available. Navigational use is thus considered only insofar as other uses are affected by navigation, or affect navigation; see 1987 ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, Art. 2(2), and commentary in 1987 *YbILC* Vol. II Pt. 2, at 26. Non navigational use includes agricultural use (irrigation, drainage...), economic and commercial use (energy production, waste disposal...), domestic and social uses (consumptive, recreational,...).

(187) Texte des Résolutions adoptées à la Session de Madrid, 1911, en ce qui concerne la Réglementation internationale de l'usage des cours d'eau internationaux, in 24 *Ann.IDI* (1911), 365-366. The 'exposé des motifs' is in fact the reflection of statement in the same sense, made by one of Institute's member during the debate on the issue; see von Bar's statement in 24 *Ann.IDI* (1911), 350. See further von Bar's first report on the use of international watercourses to the Institut published as 'L'exploitation industrielle des cours d'eau internationaux', 17 *RGDIP* (1913), 281. This statement was fully echoed by Oppenheim as he underlined that «a state, in spite of territorial supremacy, is not allowed to alter the natural conditions of its own territory to the disadvantage of the natural condition of a neighbouring state»; *International Law, A Treatise*, 2nd. edn, Vol. I (Longmans Green, 1912), at 182.

(188) ILA, *Report of the Forty-seventh Conference*, Dubrovnik, 1956, 241, at Princ. III-V. The equitable apportionment doctrine had yet already been developed by Smith in the early 1930s; *The Economic Uses of International Rivers* (P.S. King & Son, 1931), 151-152.

(189) See for instance 1980 ILA Draft Rules of International Law on Transfrontier Pollution (Art. 6), in *(continued)*

Albeit not formally binding¹⁹⁰, the 1966 ILA Helsinki Rules have often been regarded as the most comprehensive codification of the environmental rules available 'for general application to the uses of sweet water'⁽¹⁹¹⁾, 'that fully reflected the international jurisprudence, and expressed the sense of the law of that time'⁽¹⁹²⁾. The equitable utilisation provisions played a significant role both in the evolution of the case-law on shared water resources⁽¹⁹³⁾, and largely inspired the development of international river law⁽¹⁹⁴⁾. IDI and ILA's positions were largely reflected in ILC's work on the codification of rules on Non-Navigational Uses of International Watercourses. The principles of shared natural resources and community of interests were first endorsed by Mr Schwebel in his second report⁽¹⁹⁵⁾, whilst that of equitable utilisation (or

ILA, *Report of the Fifty-ninth Conference*, Belgrade, 1980, 531; 1982 ILA Montreal Rules On Water Pollution in an International Drainage Basin (Art. 1) in ILA, *Report of the Sixtieth Conference*, Montreal, 1982, 535 *et sequ.* In the same line, see 1979 IDI Athens Draft Resolution on Water Pollution, Art. 2, in 58 *Ann.IDI* (1979-II), 196; 1987 IDI Cairo Draft Resolution on air pollution across national frontiers, Art. 2, in 62 *Ann.IDI* (1987-I), 188.

¹⁹⁰ See *supra* Chap. 1/2/iii. Legal Framework *in fine*.

(191) Schwebel, 'First Report on the Law of the non-navigational uses of international watercourses', A/CN.4/320, 21 May 1979, 1979 *YbILC* Vol. II Part 1, 143, at Para. 66.

(192) Hohmann, *Precautionary Legal Duties* (1994), 32; Handl, 'The Principle of 'Equitable Use' as Applied to Internationally Shared Natural Resources: Its Role in Resolving Disputes over Transfrontier Pollution', 14 *RBDI* (1978-79), 40, at 48. It must be noted however, that the Swiss Federal Council declared that «Helsinki Rules are essentially theoretical in character and are not *per se* directly binding upon States»; reported by Caflisch, 'La pratique suisse en matière de droit international public - 1970', 27 *ASDI* (1971), 153, at 179-180. In the same spirit, a Brazilian member of the International Law Commission once declared that the 1966 ILA Helsinki Rules «utopian ventures into fields which States were extremely wary of entering»; reported at 1971 *YbILC* Vol. I, 279. Helsinki Rules are nevertheless constantly referred to in ILC reports on the non navigational use of international watercourses, and often quoted in relation to the regulation of the use of transboundary waters; see Birnie & Boyle, 226 *et sequ.*; Brownlie, *Principles*, 275; Sands, *Principles*, Vol. I, 349 *et sequ.* Also Hinds, *supra* n. 184, at 319.

(193) Both India and Bangladesh expressly referred to 1966 ILA Helsinki Rules on the Use of Waters of International Rivers in the pronouncements of their respective position in the dispute on the diversion of the waters from the Ganges (1976); relevant excerpts in 1979 *YbILC* Vol. II, Pt. 1, at Paras. 82 *et sequ.*, and the subsequent Dacca Agreement on Sharing of the Ganges Waters (1978) is geared towards optimum utilisation of the waters in a spirit of mutual *accommodation* (preambular Para. 4); 17 *ILM* (1978), 103. Hungary also explicitly refers to the Rules in its Declaration Terminating Treaty concerning the Construction and Operation of the *Gabcikovo-Nagymaros* system of locks; 32 *ILM* (1993), 1259, at 1286, and in its original application to the ICJ; Sands, *Principles* (Vol. II A), No 28, at Para. 31; see further Eckstein, 'Application of International Water Law to Transboundary Groundwater Resources, and the Slovak-Hungarian Dispute Over Gabcikovo-Nagymaros', 19 *Suffolk TLR* (1995), 67, at 91 *et sequ.* and 110 *et sequ.* The rules were also mentioned in the decisions of Rotterdam Tribunal in the Mines of Potasse case; see for instance *Handelskwerkerij G.J. Bier B.V. v. Mines de Potasse d'Alsace SA*, District Court of Rotterdam, 16 December 1983, NJ (1984), No. 341; reported in 15 *Netherlands YbIL* (1984), 471, at 480.

(194) See list of treaty provisions concerning the equitable utilisation of contiguous and successive watercourses (by 1985) in 1986 *YbILC* Vol. II Pt. 1, at 134 *et sequ.*

(195) Schwebel, 'Second Report on the Law of the non-navigational uses of international watercourses', A/CN.4/332 & Addendum 1, 24 April and 22 May 1980, 1980 *YbILC* Vol. II Part 1, 159, at Paras. 140 (*continued*)

equitable participation) was affirmed in his third report on the issue⁽¹⁹⁶⁾. Both principles have subsequently been consistently reaffirmed without substantial modification, and were duly reflected in the 1997 UN Convention on the Non-Navigational Uses of International Watercourses⁽¹⁹⁷⁾.

In this sense, even though the first international statement of the no substantial transboundary harm principle⁽¹⁹⁸⁾ was contained in an 'air pollution' case, it emerged as a principle of coexistence and good neighbourliness⁽¹⁹⁹⁾, with no particular environmental connotation. Having to decide upon the degree of admissibility of the release of noxious gas by a Canadian smelter, the Arbitral Tribunal, largely inspired by domestic pollution cases⁽²⁰⁰⁾, found against Canada that:

«...under the principles of international law (...) no State has the right to use, or permit to use its territory in such a manner as to cause injury by fumes in or to the *territory* of another of the *properties* or the *persons* therein, when

et sequ.

(196) Schwebel, 'Third Report on the Law of the non-navigational uses of international watercourses', A/CN.4/348, 11 December 1981, 1982 *YbILC* Vol. II Part 1, 65, at Paras. 41 *et sequ.* The ILC's 1994 Draft Articles on the law of Non-Navigational Uses of International Watercourses endorses the rule of equitable and reasonable utilisation and participation, with the view of attaining *optimum* utilisation; see comment to the equitable utilisation provisions (draft Art. 5 and 6, initially 6 and 7) at 1987 *YbILC* (1991) Vol. II Pt. 2, 32.

(197) Arts. 5 and 6. The principles were already expressed in similar terms in the 1992 ECE Watercourses Convention (Art. 2(c)).

(198) Terminology after Nollkaemper, 'The Precautionary Principle in International Environmental Law: What's New under the Sun?', 22 *MPBull.* (1991) 107; the author also uses, apparently as a full synonymous, the expression of *no-appreciable harm*; Nollkaemper, *The Legal Regime for Transboundary Water Pollution: Between Discretion and Constraint* (Martinus Nijhoff/Graham & Trotman, 1993).

(199) Principle of good neighbourliness was given clear expression in the *Island of Palmas* case *supra* n. 179, and was subsequently formally endorsed as a Charter principle; see 1945 UN Charter, preambular Para. 5 and Art. 74. The importance of developing and strengthening good-neighbourliness between States was acknowledged in a UN General Assembly resolution in 1988, then put as an item on the General Assembly's agenda; see UNGA, A/Res./43/171, 9 December 1988; also A/Res./46/62, 9 December 1991.

(200) Hence for instance, in 1927 already, the German Staatsgerichtshof held that «[t]he exercise of sovereign rights by every State in regard to international rivers traversing its territory is limited by the duty not to injure the interest of other members of the international community. Due consideration must be given to another State through whose territories there flows an international river. No State may substantially impair the natural use of the flow of such a river by its neighbour. The principle has gained increased recognition in international relations...»; *Donauversinkung* case (Sinking of the Danube, Württemberg & Prussia v. Baden (1927), 4 *Annual Digest of Public International Law Cases 1927-1928* (1931), 128, at 131. Also often quoted in this respect is the decision the Swiss Federal Court in an inter-cantonal noise pollution case. The Court found that a State (in that case a Canton) may freely exercise its sovereignty provided it does not infringes the rights derived from sovereignty of another State (Canton), and consequently, banned the use of shooting-butts in Aargau until appropriate protective measures had been introduced; *Solothurn v. Aargau* (1900), *BGE* 26 I 444, at 450.

the case is of serious consequence and the injury is established by clear and convincing evidence.»⁽²⁰¹⁾

The principle of equitable utilisation of shared natural resources and the related no substantial transboundary harm principle have been consistently reaffirmed as the relevant rules in the field of water management and pollution⁽²⁰²⁾, and were extended to

(201) *Trail Smelter* arbitration (US v. Canada), Final Award, 35 *AJIL* (1941), 684, at 716 (emphasis added). Review of and reference to US case-law at 714 *et sequ.* See also the dispute between Switzerland, Liechtenstein and Austria in the early 1970s, over the construction of an oil distillery on the Swiss side of their common border, and related risks of emissions of sulphur dioxide; summary and discussion of the dispute in Wildhaber, 'Die Öldestillieranlage Sennwald und das Völkerrecht der Grenzüberschreitenden Luftverschmutzung', 31 *ASDI* (1975), 97.

(202) See for instance *Lac Lanoux* arbitration (Spain v. France) (1957); *The Gut Dam* arbitration (Canada-US) (1968), 8 *ILM* (1969), 118; on which see Erades, 'The Gut Dam Arbitration', 16 *Ned. TIR* (1969), 161. See also the Mines of Potasse case: *Handelskwerkerij G.J. Bier B.V. and Stichting 'Reinwater' v. Mines de Potasse d'Alsace SA*, District Court of Rotterdam, 8 January 1979, NJ (1979), No. 113; reported in 11 *Netherlands YbIL* (1980), 326, at 332, and *Handelskwerkerij G.J. Bier B.V. v. Mines de Potasse d'Alsace SA*, District Court of Rotterdam, 16 December 1983, NJ (1984), No. 341; reported in 15 *Netherlands YbIL* (1984), 471, and 479 *et sequ.* The no substantial harm principle was also raised and unanimously endorsed in the *Gabcikovo-Nagymaros Project (Hungary/Slovakia)* dispute; see Hungarian Application to the International Court of Justice on the Diversion of the Danube River, Sands, *Principles* (Vol. IIA), No 28, Para. 32; Hungarian Termination of the Treaty, 32 *ILM* (1993), 1260; *Case concerning the Gabcikovo-Nagymaros Project (Hungary/Slovakia), Judgment*, 25 September 1997, 37 *ILM* (1998), 162, at Para. 85. Also Eckstein, 'Application of International Water Law to Transboundary Groundwater Resources, and the Slovak-Hungarian Dispute Over Gabcikovo-Nagymaros', 19 *Suffolk TLR* (1995), 67, at 107 *et sequ.* The principle has not been further developed in case-law in the field of air pollution, as no dispute has been brought to an international tribunal since (and before) *Trail Smelter* case; see however 1987 IDI Cairo Draft Resolution on air pollution across national frontiers, Art. 2.

The principle of equitable utilisation of water resources was reflected in 1972 Stockholm Action Plan for Human Environment, Recommend. 51, and in 1977 Mar del Plata Water Action Plan, Recommend. 91. Recommend. 51 was itself referred to in 1974 OECD Recommend. on the Eutrophication of Waters, preambular Para. 74, and 1974 OECD Recommend. on Principles of Transfrontier Pollution, Title B, Para. 1. More recently, equitable utilisation was endorsed in both 1992 ECE Watercourses Convention Art. 2(2)(c), and 1997 UN Convention on the Non-Navigational Uses of International Watercourses, Arts. 5; Art. 6 of the latter Convention sets out some factors relevant to equitable utilisation; *supra* p. 100. See also 1997 Treaty on Sharing of the Ganges Waters at Farakka, Arts. 2(III) and 9; 1995 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, Arts. 5 and 9. The validity of the principles of equitable utilisation and that of no transboundary harm for transboundary resources were recognised by most prominent publicists since the late 1920s; see *inter alia* Brierly, *The Law of Nations*, 5th edn (Clarendon, 1955), at 204-205; Fauchille, *Traité de Droit International Public* Vol. I, Pt. 2 (Rousseau & cie, 1925), at 448 *et sequ.*; Lauterpacht (ed.), *Oppenheim's International Law*, 8th edn, Vol. I (Longman, 1955), § 178(c); Smith, *The Economic Uses of International Rivers* (P.S. King & Son, 1931), 151-152; Winiarski, 'Principes généraux du droit fluvial international', 45 *RdC* (1933-III), 75 at 81. See also recent doctrine: Birnie & Boyle, 219 *et sequ.*; Caponera & Alhéritère, 'Principles for International Groundwater Law', in Teclaff & Utton, *International Groundwater Law* (Oceana, 1981), 25; Florio, 'Water Pollution and Related Principles of International Law', 17 *Canadian YbIL* (1979), 134; Handl, *supra* n. 81, at 86, n. 181; Lammers, *Pollution of International Watercourses*, 583-584; *Oppenheim's International Law*, Vol. I, §§ 121 and 124; Sauser-Hall, 'L'utilisation industrielle de fleuves internationaux', 83 *RdC* (1953-II) 465, at 555 *et sequ.* Some authors without dismissing the relevance of the 'equitable utilisation' approach, harbour serious reservations on its inherent vagueness, even as defined in 1966 ILA Helsinki Rules on the Use of Waters of International Rivers. See Bourne, 'International Law and Pollution of International Rivers and Lakes', 21 *University of Toronto LJ* (1971), 193, at 195; Handl, 'Balancing the Interests and International Liability for the Pollution of International Watercourses: Customary Principles of Law Revisited', 13 *Canadian YbIL* (1975), 156.

the management of shared natural resources and environmental pollution in general⁽²⁰³⁾. Besides, subsequent references in documents regulating the use of areas beyond domestic jurisdiction have given a new dimension to the principle, extending it beyond a purely transboundary context⁽²⁰⁴⁾

The principle of restricted sovereignty over natural resources and 'mutual respect of States' sovereignty over their natural resources' was first 'officially' endorsed by a large majority of States with the 1962 landmark Resolution on Sovereignty over Natural Resources⁽²⁰⁵⁾; it was given clear international legal currency in the 1972 Stockholm Declaration on the Human Environment; Principle 21 provides:

« States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that their activities within their jurisdiction or control do not cause damage to the *environment* of other States or of areas beyond the limits of national jurisdiction.»⁽²⁰⁶⁾

(203) See *inter alia* 1963 Nuclear Test Ban Treaty, Art. I(1)(b); 1968 African Conservation Convention, Art. XVI(1)(b). Also: 1972 Stockholm Action Plan for Human Environment, Recommend. 32 (exploitation of migratory species). See more recently 1991 Alps Convention, Art. 2(1). Both principles were endorsed as the applicable laws for transboundary natural resources and environmental interference in the 1986 WCED-EG Legal Principles for Environmental Protection and Development (Arts. 9 and 10), and in 1995 IUCN Draft Covenant on Environment and Development (Art. 11). The principle of no transboundary harm was particularly strongly reaffirmed in the Post-Chernobyl review of responsibility for transboundary harm; IAEA, Note by the Director General, 'The Question on International liability for Damage Arising from Nuclear Accident', IAEA Doc. GOV/INF/59, 26 January 1987, at Para. 14; quoted after Sands, 'Transboundary Nuclear Pollution: International Legal Issues', in Sands (ed.), *Chernobyl: Law and Communication* (Grotius, 1988), Introduction, at 14, n.68. See also G7 Statement, reprinted in Sands (ed.), *op.cit.*, at No. 18.

In its original application to the International Court of Justice on the Diversion of the Danube River, Hungary stated that «[a] number of cases and documents indicative of customary international law have contained this duty of states to use transboundary resources in a reasonable and equitable manner» Para. 28. Also: *Nuclear Tests (Australia v. France)*, Judgment of 20 December 1974, ICJ Rep. 1974, 253, Castro (diss.op.), at 389, on a duty to prevent pollution released by extra-atmospheric nuclear tests; *Fisheries case*, Judgment of December 18th, 1951: ICJ Rep. 1951, 116, Alvarez (sep.op.), 148-49, and *Fisheries Jurisdiction (United Kingdom v. Iceland, Federal Republic of Germany v. Iceland)*, Merits, ICJ Rep. 1974, 3, at Para. 72, on the preferential (fishing) rights of a coastal State as they are limited by «the rights of other States...».

(204) *Inter alia* 1967 Outer space Treaty; 1972 Stockholm Declaration, Princ. 21; 1979 Moon Treaty; 1982 UNCLOS, Arts. 145 and 209; 1988 CRAMRA, Art. 2; 1991 Antarctic Treaty Environmental Protocol, Art. 3; 1994 Energy Charter Treaty, Art. 18(1). See Birnie & Boyle, 91; Charney, 'Third State Remedies for Environmental Damage to the World's Common Spaces', in Francioni & Scovazzi (eds.), *International Responsibility for Environmental Harm* (Graham & Trotman, 1991), Chap. 6 (162-166); Fleischer, 'The International Concern for the Environment: the Concept of Common Heritage', in Bothe, *Trend in Environmental Policy and Law* (IUCN, 1980), 321, at 336; Sohn, 'The Stockholm Declaration on the Human Environment', 14 *Harvard ILJ* (1973), 433, at 485 *et sequ.*

(205) Paras. 3, 5, 6, 8.

(206) Emphasis added.

Most international law documents, binding or not, echo, if not literally at least substantially, the whole or part of Principle 21⁽²⁰⁷⁾; they sometimes simply refer to Principle 21 as such⁽²⁰⁸⁾. Repeated references to Principle 21 in subsequent documents, and consistent States practice leaves little room for doubts about the customary nature of the no transboundary harm principle as set forth in the 1972 Stockholm Declaration on the Human Environment, Principle 21⁽²⁰⁹⁾. This is also the conclusion reached by the International Court of Justice in 1996, in its advisory opinion on the legality of the threat or use of nuclear weapons:

(207) *Inter alia* 1972 UNESCO World Heritage Convention, Art. 6; 1985 Asean Agreement on the Conservation of Nature and Natural Resources, Art. 20(1); 1992 Climate Change Convention, preambular Para. 8; 1992 ECE Industrial Accidents Convention, preambular Para. 8; 1997 UN Convention on the Non-Navigational Uses of International Watercourses, Art. 7. The first internationally binding documents to incorporate the substance of principle 21 directly in its operative part were the 1982 UNCLOS, Arts. 192-194, and 1992 Convention on Biological Diversity, Art. 3. See also 1973 Resolution 3129 (XXVIII), on Co-operation in the Field of the Environment Concerning Natural Resources Shared by Two or More States; 1973 EEC Programme of Action on the Environment, Princ. 3 and 6; 1975 Economic Charter, Arts. 2, 30, 30(2); 1975 CSCE Final Act; 1978 UNEP Draft Principles on Shared Natural Resources, Princ. 3; 1982 World Charter for Nature, Paras. 20-21; 1985 UNEP Montreal Guidelines on the Protection of the Marine Environment Against Pollution from Land-Based Resources, Sect. 2; US 1986 Third Restatement of Law, § 602(1); 1989 Resolution 44/228, on United Nations Conference on Environment and Development, Para. 7; 1990 Bangkok ESCAP Ministerial Declaration on Environmentally Sound and Sustainable Development in Asia and the Pacific, Para. 18; 1992 Forestry Principles, Princ. I(a); 1992 Agenda 21, Para. 15.3.

(208) See for instance 1979 ECE Transboundary Air Pollution Convention, preambular Para. 5, referring to Princ. 21 as an expression of 'common conviction of States'; 1985 Convention for the Protection of the Ozone Layer, preambular Para. 2. Also: 1974 OECD Council Recommend. C(74)224, concerning Transfrontier Pollution, Para. 1; 1977 ENMOD Convention, preambular Para. 4 ; 1987 UNEP Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes, Para. 1. A series of documents make a general referenceto the 'relevant provisions of Stockholm Declaration': 1989 Basel Convention on Transboundary Movement of Hazardous Wastes, Para. 13; 1991 ECE Convention on Environmental Impact Assessment, preambular Para. 4; 1992 ECE Watercourses Convention, preambular Para. 5; 1992 Baltic Sea Convention, preambular Para. 7; 1992 Climate Change Convention, preambular Para. 7. See also 1974 OECD Declaration on Environmental Policy, preambular Para. 4.

(209) UNGA, A/Res./2996 (XXVII), 15 December 1972, provides that 1972 Stockholm Declaration on the Human Environment Princ. 21 and 22 «lay down the basic rules governing the matter». This latter resolution was adopted by with no opposition; the Eastern bloc abstained, as it abstained for 1972 Stockholm Declaration on the Human Environment (it boycotted the whole Stockholm Conference to manifest against the exclusion of East Germany from the Conference) and thus did to take part to the elaboration of Princ. 21. Nonetheless, it is usually admitted that the endorsement of numerous subsequent documents referring to / recognising the legal value of Stockholm Princ. 21 (1982 UNCLOS, Arts. 192-194 for instance) implied an *a posteriori* endorsement of the legally binding character of the principle; Birnie & Boyle, 90-91, n.41. Several States declared at Stockholm that Principle 21 fully reflected the existing customary law on the issue. The customary character of the Princ. 21 was also recognised in 1986 WCED-EG Legal Principles for Environmental Protection and Development (comment to Art. 10), and 1995 IUCN International Covenant on Environment and Development (comment to Art. 11). Both New Zealand and France in the latest nuclear test case appeared to share the view that Princ. 21 expresses 'a well established proposition of international law', although the Court abstained from taking position; referred after Sands, 'L'affaire des essais nucléaires II (Nouvelle-Zélande c. France) : Contribution de l'instance au droit international de l'environnement', 102 *RGDIP* (1997), 447, at 462, n. 64 and 65.

«The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of other areas beyond national control is now part of the corpus of international law relating to the environment.»⁽²¹⁰⁾

A large number of authorities in the field on international and environmental laws also regard Principle 21 as part of customary law⁽²¹¹⁾. A serious controversy remains nonetheless, as to whether the no transboundary harm principle, as enshrined in the 1972 Stockholm Declaration on the Human Environment Principle 21, is directly 'operational' and directly binding upon States, or whether it remains a 'programmatic' principle which needs to be translated into specific treaty provisions.

Koskenniemi for instance, while acknowledging the international practice in support of the existence of 'a positive duty on states to pay reasonable attention to the interests of other states when conducting activities that they are entitled to carry out in their territories', is more critical about the concrete and precise content of what he regards as an 'undoubtedly ambiguous' standard⁽²¹²⁾. Likewise, for Quentin-Baxter, Principle 21 is 'an imperfectly formulated obligation', 'lurking in the background' of international law, that entails effective and concrete obligations only when, and insofar as it is

(210) The advisory opinion is reproduced at 35 *ILM* (1996), 809; quotation at Para. 29. Position reaffirmed unequivocally in *Case concerning the Gabcikovo-Nagymaros Project (Hungary/Slovakia), Judgment*, 25 September 1997, General List, No. 92, 37 *ILM* (1998), 162, at Para. 53.

(211) See for instance Beyerlin, 'Rio-Konferenz 1992: Beginn einer globalen Umweltrechtsordnung?', 54 *ZaöRV* (1994), 124, at 128; Biermann, 'Common Concern of Humankind': the Emergence of a New Concept of International Environmental Law'; 34 *AVR* (1996), 426, at 432; Birnie & Boyle, 91 *et sequ.*; Caldwell, *International Environmental Policy*, at 118; Brunnée, 'Common Interest- Echoes from an Empty Shell? Some Thoughts on Common Interests and International Environmental Law', 49 *ZaöRV* (1989), 791, at 795; Charney, 'Third States Remedies for Environmental Damage to the World's Common Spaces', in Francioni & T. Scovazzi, *International Responsibility for Environmental Harm* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 6, at 163; Drogula, 'Developed and Developing Countries: Sharing the Burden of Protecting the Atmosphere', 4 *Georgetown IELR* (1992), 257, at 263; Dupuy, 'International Liability for Transfrontier Pollution', in Bothe (ed.), *Trends in Environmental Policy and Law* (IUCN, 1980), 363, at 371 *et sequ.*; Epiney, *supra* n. 180, at 318; Gavouneli, 'The Obligation to Protect the Environment with Reference to Marine Pollution Regulations', 46 *Revue Hellénique de Droit International* (1993), 77, at 92; Handl, 'Balancing of Interests and International Liability for Pollution of International Watercourses: Customary Principles Revisited', 13 *Canadian YbIL* (1975), 156, at 160 *et sequ.*; Hinds, *supra* n. 184; Kiss, *Droit International de l'Environnement* (Pédone, 1983), 34; Kiss & Shelton, *International Environmental Law*, 107; Maffei, *La protezione internazionale delle specie animali minacciate* (CEDAM, 1992), 318-319; Rest, 'Die rechtliche Umsetzung der Rio-Vorgaben in der Staatenpraxis', 34 *AVR* (1996), 145, at 149; Sands, *Principles* (Vol. I), 190; Sohn, 'The Stockholm Declaration on the Human Environment', 14 *Harvard ILJ* (1972), 423, at 485; Wildhaber, *supra* n. 201, at 102-103; Wolfrum, 'Purposes and Principles of International Environmental Law', 33 *German YbIL* (1990), 308, at 310. For a different view, see Schachter, 'The Emergence of International Environmental Law', 44 *JIA* (1991), 457, at 463; and more skeptical, Bodansky, 'Customary (and Not So Customary) International Environmental Law', 3 *Indiana Journal of Global Legal Studies* (1995), 105.

(212) 'International Liability for Transfrontier Pollution Damage', 2 *IEA* (1990), 309. More particularly on the controversy related to the threshold of the harm, *infra* Chap. 3/3/ii. Risk-Harm to be Averted/Minimised.

implemented in specific conventional norms⁽²¹³⁾.

Another group of authors, together with certain States, consider on the contrary that the customary no substantial transboundary harm principle, as set forth in the 1972 Stockholm Declaration on the Human Environment, is directly binding upon States; the conclusion of specific treaty provisions endorsing the principle is therefore simply a manifestation of States' compliance with their duty under Principle 21. Hence, such conventional specific obligations add to, but do not supersede, States' obligations under international customary law⁽²¹⁴⁾.

b. Limits Flowing from General International Law

Limits pertaining to international law in general relate essentially to the issue of compensation in case of nationalisation. States' exclusive territorial sovereignty, and the related principle of non intervention in the domestic affairs of other States implies that each State is responsible for the protection of the rights and interests of foreign nationals under its territorial jurisdiction⁽²¹⁵⁾. More particularly, a certain restriction upon state permanent sovereignty over natural resources lies in the duty to respect and preserve the property rights and related prerogatives of foreign nationals.

The principle of indemnification in case of expropriation or nationalisation is more appropriately dealt with elsewhere⁽²¹⁶⁾. For the purpose of this section, it is sufficient to

(213) See Second Report on the International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law, 1981 *YbILC* Vol. II, Pt. 1, Para. 18; Third Report on the International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law, 1982 *YbILC* Vol. II, Pt. 1, Para. 46.

(214) Handl, 'National Use of Transboundary Air Resources: The International Entitlement Issue Reconsidered', 26 *NRJ* (1986), 405, at 447; Pallemmaerts, 'International Legal Aspects of Long-Range Transboundary Air Pollution', 1 *Hague YbIL* (1988) 189, at 205 *et sequ.* See also Norway's position, in Pallemmaerts, *ibid.*, at 223, n.158.

(215) See *Island of Palmas case*, *supra* n. 179, at 839.

(216) The principle of prompt and effective indemnification in case of expropriation was largely recognised as a general principle of international law by most prominent Occidental publicists; see for instance Kunz, 'La crise et les transformations du droit des gens', 88 *RdC* (1955-II), 93; Sibert, 'La guerre civile d'Espagne et les droits des particuliers', 44 *RGDIP* (1937), 505, at 527 *et sequ.*; Verdross, 'Les règles internationales concernant le traitement des étrangers', 37 *RdC* (1931-III), 321, at 364. See however more reticent, Francioni, 'Compensation for Nationalization of Foreign Property: the Borderland between Law and Equity', 24 *ICLQ* (1975), 255; Lapres, 'Principles of Compensation for Nationalised Property', 26 *ICLQ* (1977), 4, at 97.

The principle of prior and effective indemnification for the expropriation of private property was also endorsed by the ILA, as a principle of international law; see 1926 ILA Vienna Resolution in ILA, *Report of the Thirty-second Conference*, Vienna, 1926, at 248-249, Para. 5. Early reports of the ILC on State Responsibility recognised the principle of adequate indemnification as the applicable law; see Garcia Amador, 1959 *YbILC*, Vol. II, at 14; 1961 *YbILC* Vol. II, at 49, and Jimenez de Arechaga supported the principle of prompt, just and effective compensation; 1963 *YbILC*, Vol. III, at 248. The ILC has yet been criticised for referring exclusively to occidental authorities, and ancient case law to support its approach. (*continued*)

underline that whilst, as a matter of principle, the right to nationalise is finally recognised as a prerogative inherent in state sovereignty over natural resources⁽²¹⁷⁾, the conditions of exercise of such right, and more particularly the question of indemnification, have remained the object of serious controversy. Occidental States, drawing a lesson from the Soviet nationalisation in 1917-1918, came to assert the principle of 'prompt, full and effective indemnity', as the 'minimum standard of civilisation' in case of nationalisation of foreign owned property⁽²¹⁸⁾. Third World countries, on the other hand, when not rejecting the principle of compensation altogether⁽²¹⁹⁾, endorsed the theory of the socialist countries of an 'indemnification calculated in a historical perspective' which would take into account the cumulated benefit realised from the exploitation of the property before its nationalisation⁽²²⁰⁾.

A consensus was finally reached in the earliest resolutions, whereby nationalisation was to be considered as a prerogative of the State stemming from the sovereignty over natural resources⁽²²¹⁾, which necessitates the payment of an 'appropriate compensation in accordance with the rules in force in the State taking such measures (...) and accordance with law'⁽²²²⁾. Any subsequent efforts from developing States to bar

Express reference to state responsibility for acts of expropriation, included in early drafts articles on State Responsibility, have been subsequently abandoned.

Whilst other authors considered on the contrary that the recognition of an obligation of indemnification of foreign owned property constituted an unacceptable infringement of state sovereignty, and that conditions and modalities of indemnification should be left for domestic law to solve; see most notably Fischer Williams, 'International Law and the Property of Aliens', 9 *British YbIL* (1928), 1; also Bartos, 1959 *YbILC*, Vol. I, at 162.

(217) *Supra* n. 2, 7, and 9.

(218) Such principle was first asserted by the American Secretary of State Cordell Hull in 1938, in the context of the Mexican expropriation of agrarian properties owned by American Citizens; full statement in 32 *AJIL* (1938), *Suppl.*, 181.

(219) Mexico for instance, objected to US/UK claims of indemnification for nationalised property, *inter alia* on the ground that no such indemnity had been paid either to Mexican nationals affected by the measures of nationalisation (principle of national treatment); see note of the Ministry of Foreign Affairs of Mexico to the American Ambassador at Mexico City (translation), in 32 *AJIL* (1938) *Suppl.*, 186.

(220) *Quoc Dinh: Droit International Public*, § 445.

(221) 1962 landmark Resolution on Permanent Sovereignty over Natural Resources, Sect. I, Para. 4. See *infra*: Sovereign Control over, and Exploitation of Mineral Resources and Other Natural Assets. Further references and detailed summary of the debates on indemnification leading to 1962 landmark Resolution on Permanent Sovereignty over Natural Resources in Rosenberg, *Le Principe de la Souveraineté des États sur leurs ressources Naturelles*, at 159 *et sequ.*

(222) UNGA, A/Res./626 (VII), 21 December 1952, on the Right to Exploit Freely Natural Wealth Resources, refers to the purposes and principles of the UN Charter (preambular Para. 3); the landmark Resolution on Permanent Sovereignty over Natural Resources repeatedly mentions international law (Princ. 2, 3, 7 and 8); so does equally A/Res./2158 (XXI), 25 November 1966, on Permanent Sovereignty over Natural Resources, confirming the landmark declaration (Princ. 1); see also *Topco & BP Cases*, *supra* n. 9. See further: 1978 Amazon Treaty, Art. IV. No consensus has been reached on the
(continued)

reference to the general principles of international law or express reference to the principle of indemnification in relation to permanent sovereignty over natural resources were consistently opposed by developed States⁽²²³⁾.

c. Limits Arising from General Environmental Considerations

Over the past two decades, the concept of state permanent sovereignty over natural resources has been confronted with the reality of increasingly intrusive international environmental regulations⁽²²⁴⁾. As Birnie & Boyle note:

«...the concept of permanent sovereignty has not prevented international law from treating conservation issues within a state's territory as questions of

modalities of compensation. However, the tendency has been to resolve the question on a case by case basis, according to the specific circumstances of each case; Rosenberg underlines the lack of a consensus on the principle of prior effective and prompt indemnification as the rule on the issue, and points out that, since the Second World War, payments of the indemnity have tended to be made *a posteriori*, as part of a general lump-sum agreement between the concerned States. He suggests such tendency might be indicative of an emerging international custom; Rosenberg, *Le Principe de souveraineté des États sur leurs ressources naturelles*, 169; also *Quoc Dinh: Droit International Public*, § 445.

(223) The lack of express reference to the principles of international law in UNGA, A/Res./626 (VII), 21 December 1952, on the Right to Exploit Freely Natural Wealth Resources, triggered reservations from the part of capital-exporting countries, *inter alia* the USA, UK and Netherlands; see Hyde, 'Permanent Sovereignty over Natural Wealth and Resources', 50 *AJIL* (1956), 854, at 857. Likewise, capital-exporting States found the lack of explicit reference to international law in the 1974 NIEO Declaration and the 1975 Economic Charter to be an unacceptable regression as compared to the consensus reached in 1962, and formulated some reservations in this sense as regard to the 1974 NIEO Declaration. The German delegation for instance, underlined that the right to nationalisation is granted by international law and should be exercised according to international law; see the texts of the 'reservations' entered by USA, Germany, France, Japan and the UK in 13 *ILM* (1974), 744. The controversy, nonetheless, was not strong enough to provoke a vote.

No such consensus could be reached six months later, when the Economic Charter was submitted to the approbation of the General Assembly. A group of States, including those who entered a reservation in the NIEO Declaration, suggested an amended version of Article 2, whereby a reference to the duty to comply in good faith with international duties would be expressly mentioned (Para. 3 of the amended article); Proposed Amendment to Article 2 in 14 *ILM* (1975), 262. Article 2 (c), which refers to the payment of indemnity as a matter of desirability (should), was finally accepted without amendment in a separate vote, with 16 States opposing (the 5 States which had already expressed their reservations on the question when the NIEO Declaration was adopted, plus Austria, Belgium, Canada, Denmark, Ireland, Italy, Luxembourg, Netherlands, Norway, Spain and Sweden) and 6 abstaining (Australia, Barbados, Finland and Israel, New Zealand and Portugal); voting record annexed to the Proposed Amendment. The Charter as a whole was adopted with 120 States in favour, 6 against (Belgium, Denmark, Germany, Luxembourg, the United Kingdom and the USA) and 10 abstentions (Austria, Canada, France, Ireland, Israel, Italy, Japan, the Netherlands, Norway and Spain). The economic strength of those States, major members of the OECD, accounting for over two-third of the world trade seriously undermines the real impact and credibility of the Economic Charter, which was intended to reflect a consensus between those major economic powers, main duty-bearers, and the developing states, principal beneficiaries of the rights set out in the Charter.

(224) *Supra*, 2/iii. Sovereignty over Environmental Resources and Environmental Policies versus Globalisation of Environmental Standards and Policies

common concern in which international community possesses a legitimate interest.»⁽²²⁵⁾

The dramatic increase in cross-border and global environmental problems and the realisation of the interrelatedness of environmental issues have constituted a particular challenge to the classic conception of sovereignty and sovereignty-based approach to environmental protection⁽²²⁶⁾. No specific reference to environmental protection was contained in early statements of permanent sovereignty over natural resources⁽²²⁷⁾. However, it could be argued that the reference to the 'well-being of the people', contained *inter alia* in the 1962 landmark Resolution on Permanent Sovereignty over Natural Resources⁽²²⁸⁾ and in the 1974 NIEO Declaration⁽²²⁹⁾, encompasses environmental values, it being understood that a healthy and clean environment is a major aspect of peoples' well-being. In this respect, it is worth recalling that early EEC environmental regulations in the field of the environment were justified, *inter alia*, as necessary to achieve «the constant improvement of the living and working conditions of [States']peoples», under the preamble and Article 2 of 1957 EEC Treaty, in the absence of any explicit formal basis for the exercise of Community competence on environmental issues. Such basis was for instance invoked for the first three EEC Programmes of Action on the Environment⁽²³⁰⁾.

Environmental constraints upon permanent sovereignty over natural resources were alluded to in 1966 Resolution 2158 (XXI) reaffirming the principle of permanent sovereignty, in the form of a warning that «the natural resources are limited and in many case exhaustible and (...) their proper exploitation determines the conditions of the economic development of developing countries...»⁽²³¹⁾. The first clear and explicit statement, however, was contained in the 1972 Stockholm Declaration on the Human Environment. The proclamation of state sovereignty over natural resources in Principle

(225) Birnie & Boyle, 114.

(226) Wolfrum, *supra* n. 165, at 494.

(227) UNGA, A/Res./523 (VI), 12 January 1952, on Integrated Economic Development and Commercial Agreements; UNGA, A/Res./626 (VII), 21 December 1952, on the Right to Exploit Freely Natural Wealth Resources; 1962 landmark Resolution on Permanent Sovereignty over Natural Resources.

(228) Princ. 1.

(229) Princ. 3 and 6.

(230) First EEC Programme of Action on the Environment (1973-1976, [1973] OJ C112/1); Second Action Programme (1977-1982, [1977] OJ C139/1); Third Action Programme (1983-1986, [1983] OJ C46/1). Jans, *European Environmental Law* (Kluwer Law International, 1995), 7 *et sequ.*; Krämer, *Focus on European Environmental Law* (Sweet & Maxwell, 1992), Chap. 3.

(231) Para. 4.

21 is indeed accompanied with environmental constraints pertaining to three different levels, namely:

- (1) domestic environmental policy;
- (2) no transboundary environmental harm;
- (3) no harm beyond the limits of national jurisdiction.

The most obvious and least debated source of constraints finds expression in the no transboundary environmental harm principle, which represents by-and-large a transposition of the *sic utere tuo* principle from a rule of coexistence and equitable sharing into an environmental rule⁽²³²⁾. More debated, on the other hand, are the two other sources of restriction.

(1) However desirable, restrictions upon state exploitation and depletion of resources strictly located within territorial jurisdiction are perceived as unacceptable interference with state sovereignty, which contravene to the non-intervention principle⁽²³³⁾. This was particularly clearly demonstrated with the attitude of certain States throughout the negotiation of a biodiversity and forestry international regime, and their insistence upon having their permanent sovereignty over natural resources explicitly reserved in the final documents⁽²³⁴⁾. Principle 21, echoed with the 1992 Rio Declaration on Environment and Development Principle 2⁽²³⁵⁾, is couched in similarly cautious terms, and refers to

(232) The Lac Lanoux *dictum* is indeed worded in terms of injury to *property, territory, and persons*, whilst Princ. 21 refers to the *environment* of other States; see *supra* 4/1/iii/a. Equitable Utilisation, Sic Utere Tuo and Related No Substantial Transboundary Harm Principles.

(233) See proposal to explicitly refer to State's duty to protect the integrity of its own environment at 1972 Stockholm Conference on the Human Environment, reported in Sohn, 'The Stockholm Declaration on Human Environment', 14 *Harvard ILJ* (1973), 433, at 488-489.

(234) See *supra* 2/iii. Sovereignty over Environmental Resources and Environmental Policies versus Globalisation of Environmental Standards and Policies

(235) Princ. 2 reiterates States' sovereign right « to exploit their own resources pursuant to their own environmental and developmental policies...»; such wording is considered by some as a regression as compared to Principle 21 of 1972 Stockholm Declaration on the Human Environment, in the sense that environmental consideration are put in the province of developmental law; See Kovar, 'A Short Guide to Rio Declaration', 4 *Colorado JIELP* (1993), 119, at 125; Pallemerts, 'International Environmental Law from Stockholm to Rio: Back to the Future?', in Sands (ed.) *Greening International Law* (Earthscan, , 1993), Chap. 1, at 5-6; Panjabi, 'From Stockholm to Rio: A Comparison of the Declaratory Principles of International Environmental Law', 21 *Denver JILP* (1993), 215, at 229. This view however seems unjustified, in the sense that developmental requirements have been associated with permanent sovereignty over natural resources even before environmental limits were even considered. First formulated as a matter of desirability in UNGA, A/Res./626 (VII), 21 December 1952, on the Right to Exploit Freely Natural Wealth Resources, Para. 1, the exploitation of natural resources in the interests of economic development of the State was rapidly turned into a matter of necessity: «permanent sovereignty over natural resources *must* be exercised in the interest of th[e] national development...»; 1962 landmark Resolution on Permanent Sovereignty over Natural Resources, Princ. 1 (emphasis added). The development imperative has been recurrently repeated; see for instance NIEO 1974 Declaration, Princ. 1.; 1975 Economic Charter, Art. 30; 1989 Amazon Declaration, Princ. 4; 1989 Brasilia Declaration, Princ. 1 and 2, and was indeed mentioned in 1972 Stockholm Declaration on the Human Environment, albeit in a (continued)

domestic environmental policy, without referring to *international* environmental policy. The issue is therefore one of self-imposed restriction according to self-defined standards, without any guarantee that domestic standards satisfy international standards and with no means of international supervision⁽²³⁶⁾.

A limited number of 'international standards' might be inferred from international human rights standards, such as those in matter of privacy⁽²³⁷⁾, to be enforced *via* human rights procedures. Yet as it shall be argued in a subsequent Chapter⁽²³⁸⁾, the efficiency of individual-centred human rights procedures and provisions in preserving collective values such as environmental values is limited. In fact, it would be hazardous to sustain the existence of international environmental limits restricting state sovereignty over its domestic natural resources; the tendency lies, on the contrary, on the side of an international protection of the environment consistent with state sovereignty over natural resources. The use and protection of the domestic environment thus remains, to a large extent, beyond the scope of customary and treaty-based international

separate provision. Princ. 11 states that «[t]he environmental policies of all States should enhance and not adversely affect the (...) development potential of developing countries». In the same sense, Sands, 'International Law in the Field of Sustainable Development', 65 *British YbIL* (1994), 303, at 343; Kiss, 'La Contribution de la Conférence de Rio de Janeiro au Développement du Droit International Coutumier', in Al-Nauimi & Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, 1995), 1079, at 1081.

(236) Although a number of international environmental law agreements do impose standards that are, at least in part, determined internationally, if only through resolutions of interpretation, as it is the case for instance, under the 1971 Ramsar Convention; see Bowman, 'The Ramsar Convention comes of Age', 42 *Netherlands ILR* (1995), 1. See also the 1972 World Heritage Convention, that makes a *duty* of each State to protect cultural and natural heritage located within their jurisdiction (Art. 6); as already mentioned however the convention had yet little impact on environmental protection; *supra* n. 63. The applicability of some provisions (see Art. 3 referring to Arts. 6 and 7) of the Straddling Fish Agreement to fish stocks *within* areas under national jurisdiction restricts, to a certain degree, state sovereignty over the resources within their territorial water. In the same sense, the *Fisheries Jurisdiction* cases, the International Court of Justice asserted that the preferential rights of a coastal State are to be limited, among others things, according to «the rights of other States and the needs of conservation...»; *Fisheries Jurisdiction (United Kingdom v. Iceland, Federal Republic of Germany v. Iceland)*, *Merits*, *ICJ Rep.* 1974, 3, at Para. 72. The Court abstained however from specifying whether such 'needs of conservation' were established by international or domestic law. No further indication was provided in that sense in the recent ICJ order of 22 September 1995 on *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*; the Court merely specified that its decision to reject the request against the resuming of Nuclear testing by France was 'without prejudice to the obligations of States to respect and protect the natural environment»; *ICJ Rep.* 1995, 288, at Para. 64.

(237) Hence for instance, in the famed *Lopez Ostra v. Spain*, the ECHR Court read in the individual right to privacy a certain environmental limits imposing an obligation upon Spain to abstain from causing environmental nuisance; 20 *EHR* (1995), 227. For a comment of this leading case, see for instance Sands, 'Human Rights, Environment and *Lopez-Ostra* case: Context and Consequences', 6 *EHLR* (1996), 597. Generally on the use of human rights mechanisms to safeguard environmental values, see *infra* Chap. 6/3. Towards a More Holistic Approach to International Environmental Law: the Environment-Human Rights Law Dimension.

(238) Chap. 6/3/iii. Strength and Weakness of the Human Rights Mechanisms in Protecting Environmental Interests.

environmental law.

(2) On the other hand, it is increasingly recognised, both in international environmental instruments⁽²³⁹⁾ and in the doctrine⁽²⁴⁰⁾, that state action in areas outside domestic jurisdiction is limited by a general obligation to respect the 'global environment' or the objects of common concern⁽²⁴¹⁾. Following the example of international human rights law, international environmental law tends to depart from the synallagmatic structure of traditional international rules serving and preserving reciprocal national interests, to address more global concerns of States as a whole:

«Rules of international environmental law fall into the category of norms adopted in the common interest of humanity. They generally do not bring immediate advantages to the contracting states when their objective is to protect species of wild plant and animal life, the oceans, the air, the soil, and the countryside. Even in regard to treaties concluded among a small number of states, reciprocity normally is not the primary purpose of the contracting parties.»⁽²⁴²⁾

(239) See *inter alia* 1985 Nairobi Convention on the Marine Environment in East Africa, preambular Para. 2, and 1986 Noumea Convention on the Environment in the South Pacific, preambular Para. 3. The obligation to protect the marine environment is equally stated in 1982 UNCLOS, Art. 192; 1985 UNEP Montreal Guidelines on the Protection of the Marine Environment Against Pollution from Land-Based Resources, Sect. 2. See also 1986 Tunis Declaration on Environment and Development, Para. 3; 1989 Brazilia Declaration on the Environment, Paras. 1 and 2; 1989 Amazon Declaration, Para. 4; 1991 Beijing Ministerial Declaration on Environment and Development, Para. 1. See also political commitment of ECE and G7 States to assume a responsibility for the environment at a global level, respectively 1993 ECE Lucerne Declaration, Para. 1; 1985 Bonn Economic Declaration of the G7.

(240) See for instance Birnie & Boyle, 92; Boyle, 'State Responsibility for Breach of Obligations to Protect the Global Environment', in Butler (ed.), *Control over Compliance with International Law* (Martinus Nijhoff, 1991), 69, and 'State Responsibility and International Liability for Injurious Consequences of Acts not Prohibited by International Law: A Necessary Distinction?', 39 *ICLQ* (1990), 1; Charney, 'Third States Remedies for Environmental Damage to the World's Common Spaces', in Francioni & Scovazzi, *International Responsibility for Environmental Harm* (Graham & Trotman/Martinus Nijhoff, 1991) Chap. 6, at 162 *et sequ.*; Kiss, 'Concluding Observations on Transboundary Air Pollution and the Emerging Concepts of International Law', in Flinterman *et al.* (eds.), *Transboundary Air Pollution: International Legal Aspects of the Co-operation of States* (Martinus Nijhoff, 1986), Chap. 18, at 362; Wolfrum, 'Purposes and Principles of International Environmental Law', 33 *German YbIL* (1990), 308. Gavouneli refers to the more restricted obligation not to *pollute* global environment; 'The Obligation to Protect the Environment with Reference to Marine Pollution Regulations', 46 *Revue Hellénique de Droit International* (1993), 77, at 100. More sceptical, see Bodansky, 'Customary (and Not So Customary) International Environmental Law', 3 *Indiana Journal of Global Legal Studies* (1995), 105.

(241) Any further precision lacking, the ICJ's affirmation of a general duty of States to protect the environment can potentially apply to both domestic, transboundary and global environment; see *Fisheries Jurisdiction* case and order of 22 September 1995 on *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests*, *supra* n. 236; Advisory Opinion on *Legality of the Use by a State of Nuclear Weapons in Armed Conflict*, *ICJ Rep.* 1996, 66, at Para. 32. See also very progressive views of Judge Weeramantry (diss.op.) appended to the Advisory Opinion; 35 *ILM* (1996), 879, at 904; and to the order, *ICJ Rep.* 1995, 288, at 339 *et sequ.*; and dissenting opinion of Judge Palmer, *ICJ Rep.* 1995, 288, at 405, Paras. 74 *et sequ.*

(242) Kiss & Shelton, *International Environmental Law*, at 17. Birnie & Boyle, seem to endorse the same view, although in the more limited context of common areas; Birnie & Boyle, 85. Also Picone, (*continued*)

The recognition of such duty however, is not without any practical difficulties most notably related to its implementation, in the light of the ICJ's position on *actio popularis* in international law⁽²⁴³⁾, and notwithstanding a certain degree of flexibility in the understanding of the legal interest attached to the recognition of the standing to sue⁽²⁴⁴⁾. Consequently, a number of renowned scholars⁽²⁴⁵⁾ do not hesitate to qualify

'Obblighi reciproci ed obblighi *erga omnes* degli Stati nel campo della protezione internazionale dell'ambiente marino dall' inquinamento', in Starace (ed.), *Diritto internazionale e protezione dell'ambiente marino* (Giuffrè, 1983), 15. On the non synallagmatic nature of international environmental law, see *infra* Chap. 5/3/iii. Common But Differentiated Responsibility (contingent obligations).

(243) See *South West Africa, Second Phase, Judgment, ICJ Rep. 1966*, 6, at Para. 88; Brownlie, *Principles*, at 470; Schwelb, 'Actio Popularis and International Law', 2 *Israel Yb on Human Rights* (1972), 46.

(244) The ICJ has consistently interpreted the legal interest as broader than material, pecuniary or tangible prejudice; *The S.S. "Wimbledon"*, PCIJ Ser. A, No. 1, August 17th, 1923, at 20; *South West Africa Cases (Ethiopia v. South Africa, Liberia v. South Africa), Preliminary Objections, Judgment of 21 December 1962: ICJ Reports 1962*, 319, at 343, and Judge Jessup (sep.op.), at 425; *South West Africa, Second Phase, ibid. supra* n. 243, at Para. 44; *Barcelona Traction, Light and Power Company, Limited, Judgment, ICJ Reports 1970*, 3, at Paras. 33 *et sequ.* See also Australian position on its legal interest in the cessation of nuclear tests, in *ICJ Pleadings, Nuclear Tests 1974*, Vol. I, Paras. 408 *et sequ.*; whilst the ICJ abstained to take position on Australia (and New Zealand)'s allegation of an *erga omnes* obligation to abstain from any kind of atmospheric nuclear tests, and approached the case as a 'prototype A v. B situation'; Sand, 'Transnational Environmental Disputes', in Bardonnnet (ed.), *The Peaceful Settlement of International Disputes in Europe: Future Prospects*, Hague Academy of International Law Workshop 1990 (Martinus Nijhoff, 1991), Chap. 7, at 131. The existence of such obligation as a basis for *locus standi* was questioned in several dissenting opinions. Hence Judge Ignacio-Pinto for instance, himself firmly opposed to the resuming of nuclear tests, considered nonetheless that «in the present state of international law, the 'apprehension' of a State, or 'anxiety' (...) does not (...) suffice to substantiate some higher law imposed on all States (...)»; *Nuclear Tests (Australia v. France), Interim Protection, Order of 22 June 1973, ICJ Rep. 1973*, 99, at 132; also Judge Petren, *ibid.*, at 127, and his sep. op. in the judgement on the merits, *Nuclear Tests (Australia v. France), Judgment of 20 December 1974, ICJ Rep. 1974*, 253, at 302-303. See also dis.op. of Judges Gros and Castro in judgement on the merits, *ibid.*, respectively at 286 *et sequ.* and 387-88. See also Charney, *supra* n. 240. *Erga omnes* environmental obligations were equally invoked by New Zealand, (and subsequently by Solomon Islands) in its attempt to have the resuming of underground nuclear testing by France condemned by the ICJ; referred after Sands, 'L'affaire des essais nucléaires II (Nouvelle-Zélande c. France) : Contribution de l'instance au droit international de l'environnement', 102 *RGDIP* (1997), 447, at 459, n. 45. The Court however did not decide on the merits of the case, considering that the possibility left under the 1974 Judgment to have the case re-opened and reviewed applied only to atmospheric testing, to the exclusion of underground testing.

(245) See Bilder, 'The Present Legal and Political Situation in Antarctic', in Charney, *The New Nationalism and the Use of Common Spaces: Issues in Marine Pollution and the Exploitation of Antarctica* (Allanheld Osmun, 1981), 198; Brown Weiss, 'The Planetary Trust: Conservation and Intergenerational Equity', 11 *Ecology LQ* (1984), 495, at 544; Epiney, *supra* n. 180, at 452; Kirgis, 'Standing to Challenge Human Endeavours that Could Change the Climate', 84 *AJIL* (1990), 525, at 527; Kiss & Shelton, *International Environmental Law*, at 17; Schneider, *World Public Order of the Environment, Towards an International Ecological Law and Organization* (Stevens & Sons, 1975), at 130-131; Wolfrum, *supra* n. 240. See also cautious recognition by Sands, 'Compliance with International Environmental Obligations: Existing International Legal Arrangements', in Cameron (ed.), *Improving Compliance with International Environmental Law* (Earthscan, 1996), Chap. 3, at 61 *et sequ.* Consider equally 1995 IUCN Draft International Covenant on Environment and Development, comment to Art. 3. Some other authors envisages the qualification of certain environmental obligations as binding *erga omnes* as a possibility; see Brownlie, 'A Survey of International Customary Rules of Environmental Protection', 13 *Natural Resources Journal* (1973), 179, at 183, and his remark in ASIL, 'The (continued)

certain fundamental environmental obligations, including that of respecting and protecting the global environment, as obligations which «by their very nature (...) are the concern of all States» and in the respect of which «all States can held to have a legal interest»⁽²⁴⁶⁾.

Albeit not explicitly mentioned in the famous ICJ *dictum* on *erga omnes* and the subsequent restatement thereof, which all refer essentially to certain fundamental human rights provisions, there is no real ground against the qualification of some environmental obligations as *erga omnes*⁽²⁴⁷⁾. On the contrary, such qualification seems to be even more justified from two points of view:

- (a) the non synallagmatic nature of environmental obligations similar to that of the human rights obligations, expressly attributes an *erga omnes* dimension⁽²⁴⁸⁾, and
- (b) the mounting tendency to qualify certain global environmental issues as 'common concern' or 'common interest' of mankind, which some authors have no difficulty in assimilating to the 'concern of all States' qualification of *erga omnes* obligations⁽²⁴⁹⁾.

Protection of the Global Heritage', 75 *ASIL Proc.* (1981), 32. Likewise, Elihu Lauterpacht contemplates the *erga omnes* alternative under the perspective of the efficiency of international environmental law; *Aspects of the Administration of International Justice* (Grotius, 1991), at 62. In the same sense, *Oppenheim's International Law*, Vol. 1, § 125 (at p. 415); O'Connell, 'Enforcing the New International Law of the Environment', 35 *German YbIL* (1992), 293, at 312. See also, more cautious, Boisson de Chazournes, 'La mise en oeuvre du droit international dans le domaine de la protection de l'environnement: enjeux et défis', 99 *RGDIP* (1995), 37, at 53.

(246) *Barcelona Traction, Light and Power Company, Limited*, *supra* n. 244, Para. 33; the ICJ endorsed again the notion of *erga omnes* obligations in *East Timor (Portugal v. Australia)*, *Judgment*, *ICJ Rep.* 1995, 90, at Para. 29, and in the recent *Case Concerning Application of the Convention on the Prevention and Punishment of the Crime of Genocide, Bosnia & Herzegovina v. Yugoslavia (Serbia & Montenegro)*, *Preliminary Objections*, *ICJ Rep.* 1996 (non definitive official version), at Para. 31. The existence of *erga omnes* obligations was already implicitly endorsed in cases prior to the *Barcelona Traction* case, and *inter alia* in *Reservations to the Convention on Genocide, Advisory opinion: ICJ Reports 1951*, 15, at 23, and in *South West Africa Cases (Ethiopia v. South Africa, Liberia v. South Africa)*, *Preliminary Objections*, *supra* n. 244, at 343.

(247) Wolfrum for instance, considers that the ICJ's *dictum* in the *Barcelona Traction* case is by no means an isolated accident, and takes as examples of *erga omnes* formulation in the context of environmental law 1982 UNCLOS, Art. 218, recognising a right of proceedings to port States with respect of discharge from vessels under foreign flags on the high seas, in violation of international standards on environmental pollution. See Wolfrum, *supra* n. 240, at 326. One should perhaps underline that there is no generally agreed list of the *erga omnes* rights and obligations, the list set in the various ICJ decision being purely illustrative; *Oppenheim's International Law*, Vol. 1, § 125. See also 1986 US Third Restatement of the Law, §902(1), providing that «a state may bring a claim against another state for a violation of an international obligation owed to the claimant state or to states generally...»; the comment (a) to this article states further that «when a state has violated an obligation owed to the international community as a whole, any state may bring a claim in accordance with this section without showing that it has suffered a particular injury», and that «any state may call on violating state to terminate a significant injury to the general environment».

(248) *Supra* n. 242, and *infra* Chap. 5/3/iii. Common But Differentiated Responsibility (contingent obligations).

(249) See *infra* Chap. 5/2/iv. Common Concern, Common Interest of Mankind: Global Partnership or Global Bargain?

Besides, the inclusion of 'international obligations of an essential importance for the safeguarding and preservation of the human environment, such as those prohibiting massive pollution of atmosphere or of seas' in the list of 'fundamental interests to the international community as a whole', and the breach of which is recognised as an international crime⁽²⁵⁰⁾, might constitute an important step towards the recognition of the *erga omnes* character of certain environmental obligations still to be identified. It remains the case however, that States, even under the benefit of a particular *locus standi* to act on environmental issues regarding common areas or issues declared of the common concern/interest of mankind, still prefer to resort to extra-judicial means to act against other States failing to abide by fundamental international environmental obligations⁽²⁵¹⁾.

5. Concluding Comments

In the early 1970s, the UN Under Secretary-General for Economic and Social Affairs, speaking on behalf of the UN Secretary-General, stated that the endorsement of permanent sovereignty over natural resources does not constitute

«a substitute for political and philosophical reality into which we must fit a natural resources policy (...) The principle of national sovereignty should be considered in conjunction with another principle, that of world solidarity. It is the combination of these two principles that should gradually find expression in the definition of economic arrangements for this exploitation and distribution of natural resources.»⁽²⁵²⁾

Since it was first invoked as a tool to complete decolonisation and full independence, permanent sovereignty over natural resources has been constantly reasserted, albeit not

⁽²⁵⁰⁾ 1980 ILC Draft Articles on International Responsibility, Art. 19(2) and (3)(d), unmodified in the latest (1996) version. One should note however that the threshold of environmental harm under Art. 19 is significantly higher than that presumably implied in a general obligation to preserve and protect the environment; see by analogy *infra* Chap. 3/3/ii. Risk-Harm to be Averted/Minimised. However, Arangio-Ruiz, ILC special Rapporteur on state responsibility, does not rule out the applicability of Art. 19 to violation of *erga omnes* obligations towards «protected objects (human beings, groups, peoples of the environment) that do not qualify as international crimes»; Eighth Report on State Responsibility, A/CN.4/476 Add.1, at 1. For an early comment of the elaboration of this Article in particular, see Dupuy, 'Action publique et crime international de l'État: A propos de l'article 19 du projet de la commission du droit international sur la responsabilité des États', 25 *AFDI* (1979), 539; Rigaux, 'Le crime d'État. Réflexions sur l'article 19 du projet d'articles sur la responsabilité des États', in *Il diritto internazionale al tempo della sua codificazione. Studi in onore di Roberto Ago*, Vol. III (Giuffrè, 1987), 301. A number of authors however consider that such definition of international crime as encompassing serious environmental issues is more *de lege ferenda* than a codification of existing practice; see Boyle, 'State Responsibility for Breach of Obligations to Protect the Global Environment', in Butler, (ed.), *Control over Compliance with International Law* (Martinus Nijhoff, 1991), 69, at 73; Gilbert, 'The Criminal Responsibility of States', 39 *ICLQ* (1990), 345, at 364; Marek, 'Criminalising State Responsibility', 14 *RBDI* (1978), 460, at 477-78.

⁽²⁵¹⁾ On the reticence of States to resort to judicial means for environment-related issues, see *supra* Chap. 1/2/iii. Legal Framework n. 151 (CR).

⁽²⁵²⁾ Quoted after Rajan, *Sovereignty over Natural Resources*, 134.

without some variations in its conception⁽²⁵³⁾. It has also remained the starting point for most treaties on environmental protection and economic co-operation. Nonetheless, there is a clear gap between the classic conception of permanent sovereignty over natural resources prevailing among States and part of the doctrine, and the context to which it applies. On the one hand, sovereignty over natural resources emerged as a tool of passive *coexistence* entailing essentially a right and a duty of non interference. On the other hand, partly on their own initiative and partly as the result of *de facto* circumstances, States have become increasingly interdependent and are driven out of their lethargic coexistence into more active co-operation⁽²⁵⁴⁾. In this context, an essentially negative conception of sovereignty represents undoubtedly an obstacle to the intensification of the co-operation between States. The problem raised by contemporary environmental challenges is only one example among others⁽²⁵⁵⁾.

The classic conception of permanent sovereignty over natural resources and related no transboundary harm principle have been revealed as inappropriate essentially on two accounts with respect to problems such as climate change, ozone layer depletion, deforestation, desertification or the loss of biodiversity:

- 1) The no transboundary harm principle follows the classic pattern of source-causality link-transboundary effect, and applies only when the source of the harm and the harm itself occur in a 'transboundary' context; cases of self-inflicted environmental damages are hence not considered. Apart from the fact that such approach presupposes that the source of the harm is known⁽²⁵⁶⁾, it fails to take into account that 'self-inflicted environmental damages' might have disastrous consequences for some other States, or indeed the whole international community. One could cite as an example massive deforestation, insofar as it contributes to the increase in carbon dioxide in the atmosphere hence to global warming.
- 2) In addition, the no transboundary harm principle is essentially construed as an individualistic principle entailing unilateral or bilateral environmental measures. It fails, however, to reflect the necessity to harmonise such measures with those taken by other States, and integrate domestic measures in a more common global strategy to effectively tackle interrelated problems.

(253) Caldwell, *International Environmental Policy*, 22.

(254) See Cassese, *International Law in a Divided World*, 30-32; see further *infra* Chap. 5/1. Introduction

(255) See in the context of human rights: Reisman, 'Sovereignty and Human Rights in Contemporary International Law', 84 *AJIL* (1990), 866.

(256) See *infra*, Chap. 3, Prevention and Precautionary Principles.

As a result, such common action or global action often appears to infringe and regulate the sovereign responsibility of States not to cause transboundary harm, while they should be perceived in fact as a co-ordination of sovereign responsibilities. The 1985 OECD/Yugoslavia Declaration on Environment rightly provides that «responsibilities and the need for action concerning environmental protection do not end at national frontiers»⁽²⁵⁷⁾. A similar conclusion was reached at the 1991 International Conference on Environmental Law; in its final Recommendations, the Conference stressed the importance to attach a three-fold responsibility to state territorial sovereignty:

«Too often, the established principle of national sovereignty is interpreted as to neglect the interdependence of the global ecosystem, and this interpretation forms an obstacle to cooperation in the work of attaining sustainable use of natural resources and the preservation of the environment. *It should be acknowledged as a rule that the principle of sovereignty implies the duty of a state to protect the environment within its jurisdiction, the duty to prevent transboundary harm, and the duty to preserve the global commons for present and future generations*»⁽²⁵⁸⁾.

International environmental protection, albeit guided by international or regional rules, principles and agendas, remains essentially national in its application. The case in sum, is not one of total surrender of permanent sovereignty over natural resources, or sovereignty in general, but one of long needed re-thinking of its outdated conception, in the light of its current context of application, as an effective tool of active co-operation⁽²⁵⁹⁾. Writing about the principle of sovereignty in general, Handl underlines that:

«...[S]overeignty signals no longer a simple *status negativus*, a legal basis for exclusion, but has become the legal basis for inclusion, or of a commitment to co-operate for the good of the international community at large: *souveraineté oblige*.»⁽²⁶⁰⁾

⁽²⁵⁷⁾ Para. (d). The 'irrelevance' of political borders when it comes to environmental protection was equally emphasised in the Council of Europe's 1968 Water Charter, which provides that 'water knows no frontiers' (Art. XII) and that the management of water 'should be based on their natural basins rather than on political and administrative boundaries' (Art. XI).

⁽²⁵⁸⁾ The Hague Recommendations, issued by the International Conference on Environmental Law, The Hague, 16 August 1991, Preamble (emphasis added).

⁽²⁵⁹⁾ See Allott, 'Power Sharing in the Law of the Sea', 77 *AJIL* (1983), 1, 27; Brunnée "'Common Interest", Echoes from an Empty Shell?', 49 *ZaöRV* (1989), 791; Bragdon, 'National Sovereignty and Global Environmental Responsibility', at 390 *et sequ.*; Conca, 'Rethinking the Ecology-Sovereignty Debate', 23 *Millennium* (1994), 701; Piddington, 'Sovereignty and the Environment: Part of the Solution or Part of the Problem?', 31 *Environment* (1989), 18; Pardo & Christol, 'The Common Interest: Tension between the Whole and the Parts', in Macdonald & Johnston (eds.), *The Structure and Process of International Law* (Martinus Nijhoff, 1986), 643.

⁽²⁶⁰⁾ Handl, 'Environmental Security and Global Change: the Challenge of International Law', in Lang et al (eds.), *Environmental Protection and International Law* (Graham & Trotman/Martinus Nijhoff, (continued)

More than twenty years after the UN Under Secretary-General for Economic and Social Affairs had issued his remark on permanent sovereignty over natural resources, the Secretary General wrote, in his Agenda for Peace:

«The foundation-stone of this work is and must remain the State. Respect for its fundamental sovereignty and integrity are crucial to any common international progress. The time of absolute sovereignty has passed; its theory was never matched by reality. It is the task of leaders of States today to understand this and to find a balance between the needs of good internal governance and the requirements of an ever more interdependent world. Commerce, communications and environmental matters transcend administrative borders...»(261).



1991), Chap. 2, 87.

(261) Boutros-Ghali, *An Agenda for Peace: Preventive Diplomacy, Peacemaking and Peace-keeping*, New York, 1992; reproduced in Roberts & Kingsbury (eds.), *United Nations, Divided World*, 2nd edn (Clarendon, 1993), 470.

CHAPTER THREE PREVENTION AND PRECAUTIONARY PRINCIPLES

1. <u>Introduction</u>	118
2. <u>Origins of the Concept</u>	120
i. <i>Vorsorgeprinzip</i> and Precautionary Principle	120
ii. Precaution as a Principle of International Law	122
a. <i>Equitable Apportionment and No Substantial Harm Principles</i>	122
b. <i>The 1972 Stockholm Declaration on the Human Environment: Institutionalisation of Prevention</i>	125
c. <i>Precaution and Sustainable Development</i>	131
iii. Status of Precautionary Principle under International law.....	139
3. <u>Constitutive Elements of a Precautionary Principle</u>	148
i. Object of Precaution	148
ii. Risk-Harm to be Averted/Minimised.....	149
iii. Causality Link Between the Object and the Harm/Risk.....	153
4. <u>Operational Implications of the Precautionary Principle</u>	156
i. Unilateral Duty of Due Diligence	156
ii. Prior Information, Notification and Consultation	157
iii. Prior Environmental Impact Assessment.....	164
5. <u>Limits Inherent in the Precautionary Principle</u>	169
i. Financial and Technical Limits	170
ii. Preservation of Incentives	174
6. <u>Concluding Comments</u>	177

1. Introduction

The principle of precaution⁽¹⁾, like the principle of intergenerational equity considered in the next Chapter, is inspired by long term objectives and future interests,

(1) See generally Böhmer-Christiansen, 'The Precautionary Principle in Germany - enabling Government', in O'Riordan & Cameron (eds.), *Interpreting the Precautionary Principle* (Cameron May, 1994), Chap. 2, at 38. Generally on the precautionary principle, see Backes & Verschuuren, 'The Precautionary Principle in International, European, and Dutch Wildlife Law', 9 *Colorado JIELP* (1998), 43; Birnie & Boyle, 89 *et sequ.*; Bodansky, 'Scientific Uncertainty and the Precautionary Principle', 33 *Environment* (1991), 4; Cameron & Abouchar, 'The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment', 14 *Boston College ICLR* (1991), 1 (hereafter Cameron & Abouchar, 'The Precautionary Principle'); Cameron & Wade-Gery, *Addressing Uncertainty: Law, Policy, and the Precautionary Principle*, Centre for Social and Economic Research of the Global Environment Working Paper 92-43 (University of East Anglia, 1992) (hereafter, Cameron & Wade-Gery, *Addressing Uncertainty*); Freestone & Hey, *Precautionary Principle in International Law* (Kluwer Law International, 1996) (hereafter Freestone & Hey, *Precautionary Principle in International Law*); Handl, 'Environmental Security and Global Change', in Lang *et al.* (eds.), *Environmental* (continued)

and relates more particularly to the environmental dimension of environmental law and policy.

The principle of precaution has emerged in the international environmental sphere in the early 1980s, as a result of a growing awareness of the gravity and apparently irreversible character of the environmental crisis⁽²⁾. The technological optimism prevailing until the early 1970s *inter alia* in relation to environmental matters, had become increasingly undermined with (a) the realisation that, by nature of its subject matter, science is inherently uncertain⁽³⁾ and (b) a general disillusionment with regard to the capacity of modern technologies to solve environmental problems. The advancement of science has not only brought a better understanding of ecosystems and cleaner technologies; it has also allowed for the development of new techniques and new products which have given a new (dramatic) dimension to the human impact on the environment:

«Traditional society could rely upon experience for policy guidance to a degree wholly unsafe today. The ability of contemporary science to produce substances and effects previously unknown on earth means that policy must now anticipate experience.»⁽⁴⁾

This chapter sets out to examine the nature and implications of the precautionary principle in international law as compared to the principle of prevention. It will first retrace the origins and first manifestations of the principle in international law, focusing upon the shift away from the traditional reactionary environmental policy to a more anticipatory policy⁽⁵⁾. It will then proceed to examine the meaning of the principle, and try to identify its practical implications and actual limits.

Protection and International Law (Martinus Nijhoff, 1991), Chap. 2; Hey, 'The Precautionary Concept in Environmental Policy and Law: Institutionalizing Caution', 4 *Georgetown IELR* (1992), 303; Hohmann, *Precautionary Legal Duties and Principles of Modern International Environmental Law* (Graham, Trotman & Nijhoff, 1994) (hereafter: Hohmann, *Precautionary Legal Duties*); Kiss & Shelton, *Traité de Droit Européen*, Chap. II; Macdonald, 'Appreciating the Precautionary Principle as an Ethical Evolution in Ocean Management', 26 *ODIL* (1995), 255; O'Riordan, *Interpreting the Precautionary Principle*, Centre for Social and Economic Research of the Global Environment Working Paper 92-03 (University of East Anglia, 1992) (hereafter, O'Riordan, *Interpreting the Precautionary Principle*); O'Riordan & Cameron (eds.), *Interpreting the Precautionary Principle* (Cameron May, 1994) (hereafter referred to after the editors); Primrosch, 'Das Vorsorgeprinzip im internationalen Umweltrecht', 51 *ZöR* (1996), 227; Reh binder, *Das Vorsorgeprinzip im internationalen Vergleich* (Werner, 1991) (hereafter Reh binder, *Das Vorsorgeprinzip im internationalen Vergleich*); Sands, *Principles* (Vol. I), 208-213; Scovazzi, 'Sul principio precauzionale nel diritto internazionale dell'ambiente', 75 *Rivista di Diritto Internazionale* (1992), 699; Simonis (ed.), *Präventive Umweltpolitik* (Campus, 1988).

(2) Or environmental crises; see *supra* Chap. 1/3. Evolutionary Perspective of Sustainable Development.

(3) The fundamental uncertainty of science has been fully recognised by scientists themselves; see Kuhn, *The Structure of Scientific Revolutions*, 3rd edn (The University of Chicago Press, 1996).

(4) Caldwell, *International Environmental Policy*, at 9.

(5) This section, like the rest of the thesis, adopts an historical perspective, and considers treaties and
(continued)

State practice at domestic and international levels clearly testifies to an emerging sense of necessity to act on certain environmental issues in spite of persistent scientific uncertainties. Nevertheless, it is suggested here that the lack of clear consensus on the core implications of the principle largely undermines its actual and potential impact, and affects its very legal status.

2. Origins of the Concept

i. Vorsorgeprinzip and Precautionary Principle

The origins of the precautionary principle both in the European and international context are far from being unanimously established. Some, essentially Anglo-Saxon, authors confirmed in their opinion by the prominent role played by Germany at North Sea Conferences⁽⁶⁾, held that the principle draws its origins in the German concept of *Vorsorgeprinzip*⁽⁷⁾. Others, more particularly German authors, stress on the contrary that the German language makes no difference between prevention and precaution, both translated as *Vorsorge*, hence both *de facto* synonymous. They therefore argue that the German *Vorsorgeprinzip* has been misinterpreted by international lawyers, and dismiss the claim that the precautionary principle, as distinguished from the prevention principle, originates in German environmental law⁽⁸⁾. They do recognise, in the light of

other documents though their respective evolution. Accordingly, it must be born in mind, on reading this section, that documents referred to at early stage in the text, have often been subjected to subsequent modifications mentioned only at a later stage.

(6) See *infra c. Precaution and Sustainable Development*.

(7) Birnie, 'Are Twentieth-Century Marine Conservation Conventions Adaptable to Twenty-First Century Goals and Principles?', 12 *IJ Marine & Coastal L* (1997), 307 (Part I), at 310; Freestone, 'The Precautionary Principle', in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Nijhoff, 1991), Chap. 2 (hereafter Freestone, 'The Precautionary Principle'); Freestone & Ryland, 'EC Environmental Law After Maastricht', 45 *NILQ* (1994), 152; Haigh, 'The Introduction of the Precautionary Principle into the UK', in O'Riordan & Cameron, 20; Hewison, 'The Precautionary Approach to Fisheries Management: an Environmental Perspective', 11 *IJ Marine & Coastal L* (1996), 301; Holder, 'Safe Science? The Precautionary Principle in United Kingdom Environmental Law', in Holder (ed.), *The Impact of EC Environmental Law in the United Kingdom* (Wiley, forthcoming); O'Riordan & Cameron, 'The History and Contemporary Significance of the Precautionary Principle', in O'Riordan & Cameron, Chap. 1; McIntyre & Mosedale, 'The Precautionary Principle as a Norm of Customary International Law', 9 *Journal of Environmental Law* (1997), 221; O'Riordan, 'Interpreting the Precautionary Principle'; Sands, 'L'affaire des essais nucléaires II (Nouvelle-Zélande c. France) : Contribution de l'instance au droit international de l'environnement', 102 *RGDIP* (1997), 447, at 470. Also Scovazzi, 'Sul principio precauzionale nel diritto internazionale dell'ambiente', 75 *Rivista di Diritto Internazionale* (1992), 699; and Garcia, 'The Precautionary Principle: its Implications in Capture Fisheries Management', 22 *OCM* 1994), 99, at 101. Some German authors remain vague with regards to the source of the principle, but seem to admit that precautionary principle as known in international environmental law draws its origins in national law, in including German law; Hohmann, *Precautionary Legal Duties*, Chap. 1; Primrosch; 'Das Vorsorgeprinzip im internationalen Umweltrecht', 51 *ZöR* (1996), 227, at 229 *et sequ.*

(8) Rehbinder, 'Das Vorsorgeprinzip im Umweltpolitik', in Simonis (ed.) *Präventive Umweltpolitik* (Campus, 1988), 129; Krämer, *E.C. Treaty and Environmental Law*, 2nd edn (Sweet & Maxwell, *continued*)

the distinction drawn between the English/French terms of prevention and precaution in international law, that the German concept of *Vorsorge* is more closely related to the English concept of precaution⁽⁹⁾. *Vorsorge* clearly implies more than actual care, and requires careful anticipation of future and potential risks, both through scientific research and proper planning at all stages and in all sectors of the environment. Scientific uncertainties do not legitimate individuals or entities to engage into activities susceptible of causing serious harm to the environment.

It seems nonetheless appropriate to consider the German *Vorsorgeprinzip*, alongside other national concepts, as cases of application of the precautionary approach; as it is obvious that, beyond similarities of appellation, each State has developed the principle in a different way, none of which has been transposed *tel quel* in international law. And whilst the principle of precaution at the national level might have evolved into a legal principle vested with a 'managerial programmable quality', this is not necessarily true for the principle at the supranational level⁽¹⁰⁾. In this respect, it must be clear that the present paper focuses on the international precautionary principle, and that the remarks and conclusions drawn do not necessarily apply to the principle at the domestic level⁽¹¹⁾.

1995), 53 *et sequ.* Reh binder stresses however, that one particularities of the German system is to make a clear difference between *Schutz-* and *Vorsorgeprinzip*, between the principle of protection and prevention/precaution; see Reh binder, *Das Vorsorgeprinzip im internationalen Vergleich*, at 249. For closer look at the German conception of *Vorsorgeprinzip*, see also Böhmer-Christiansen, 'The Precautionary Principle in Germany - enabling Government', in O'Riordan & Cameron, Chap. 2. Besides, the distinction between prevention and precaution, clearly made in international environmental law, is not always clear-cut in domestic law; hence for instance, the three official German, French and Italian versions of the Swiss Federal Law on the protection of the Environment (LPE), 7 October 1983 (Recueil Systématique des Lois Fédérales 814 01), refer, at Arts. 1(2) 11(2) respectively to '*Vorsorge*', '*prévention*' and '*prevenzione*'. In Switzerland, all texts of the law in the three official languages (German-French-Italian) have the same legally binding effect. One should also note that Hohmann's detailed study on the precautionary principle was first published under the German title *Präventive Rechtspflichten und -prinzipien des modernen Umweltvölkerrechts* (Duncker & Humholt, Berlin, 1992).

⁽⁹⁾ Von Moltke, 'The *Vorsorgeprinzip* in West German Environmental Policy', in British Royal Commission on Environmental Pollution, *Twelfth Report: Best Practicable Environmental Option* (HMSO, 1988), Appendix 3. In the landmark Governmental Report to the Federal Parliament on the Protection of Air Quality, 1984, *Vorsorgeprinzip* commands that «the damages done to the natural world (which surrounds us all) should be avoided *in advance* and in accordance with opportunity and possibility. *Vorsorge* further means the early detection of dangers to health and environment by comprehensive, synchronised (harmonised) research, in particular about cause and effect relationships..., it also means acting when conclusively ascertained understanding by science is not yet available...»; quoted after Böhmer-Christiansen, 'The Precautionary Principle in Germany - Enabling Government', at 37.

⁽¹⁰⁾ O'Riordan & Cameron, 'The History and Contemporary Significance of the Precautionary Principle', at 16; see *infra* ii/c. Precaution and Sustainable Development.

⁽¹¹⁾ For an enlightening comparative study of the domestic precautionary principle as applied in a selected number of countries, see Reh binder, *Das Vorsorgeprinzip im internationalen Vergleich*. See also references *infra* n. 80.

ii. Precaution as a Principle of International Law

a. *Equitable Apportionment and No Substantial Harm Principles*

The relation of humans/State to nature has traditionally been dominated by two major principles, namely State sovereignty and the inexhaustibility of natural resources⁽¹²⁾. The prime object of consideration was the preservation of such sovereignty, and the maximisation of the aggregate benefits derived from the exploitation of the natural resources. Early 'environmental' concerns have appeared essentially to serve those interests through the doctrine of equitable utilisation and related no substantial harm principle⁽¹³⁾.

Originally construed as a bilateral rule of coexistence and allocation of transboundary natural resources⁽¹⁴⁾ in a spirit of maximisation of the aggregate utility and minimum inconvenience⁽¹⁵⁾, the doctrine of equitable utilisation and related no substantial harm principle have first had 'incidental' environmental implications. Environmental pollution or degradation would enter into consideration only when, and insofar as, it would

(12) Hence for instance, Judge de Castro (concurring) in *Fisheries Jurisdiction* cases, stated «...fish stocks in the sea are inexhaustible...»; *Fisheries Jurisdiction (United Kingdom v. Iceland, Federal Republic of Germany v. Iceland)*, *Merits*, ICJ Rep. 1974, 3, at 80-81.

(13) *Supra*, Chap. 2. Principle of Permanent Sovereignty over Natural Resources.

(14) Most notably the utilisation of transnational waters; see *Lac Lanoux* arbitration (Spain v. France), 1957, 24 *ILR* (1957), 101; *The Gut Dam* arbitration (Canada-US) (1968), 8 *ILM* (1969), 118; *The Diversion of Water from the Meuse*, *PCIJ Ser. A/B*, Fascicule No 70, Judgment of June 28th, 1937, at 26. Similar approach was adopted with regard to the utilisation other 'shared resources' susceptible to competing exploitation at the time, such as migratory species. See *supra* Principle of Permanent Sovereignty over Natural Resources: Towards a limited Sovereignty over Natural Resources; The *Sic Utere Tuo* and Related No Substantial Transboundary Harm Principles.

(15) Both IDI and ILA legislative activity on the non navigational use of transboundary waters for instance, have been remained oriented towards the maximum utilisation of shared waters with a minimum of inconvenience for other riparian States; illustrative in this respect are the 1966 ILA Helsinki Rules on the Use of Waters of International Rivers which consecrate the idea of equitable sharing «to provide maximum benefit to each basin State from the uses of the waters within the minimum detriment to each», ILA, *Report of the Fifty-second Conference*, Helsinki 1966, 487; also: 1961 IDI Salzburg Resolution, l'utilisation des eaux internationales non maritimes (en dehors de la navigation), Preamble; 49 *Ann.IDI* (1961-II), 370.

According to Lyster, the factors common to most treaties on international wildlife law negotiated in the 50s and 60s are that (1) they were mostly concerned with *economically* valuable species, and (2) they emphasise their maximum exploitation; Lyster, *International Wildlife Law* (Grotius, 1985), at 14. Thus for instance, the original African wildlife conventions were principally motivated by the need to «preserve supplies of species which were economically valuable...»; *ibid.* at 113 (emphasis added). Likewise, the first fisheries agreements were essentially geared to fishing of the maximum sustainable yield of the stock; *ibid.* at 163. On the same line, Kiss wrote about the original 1946 Whaling Convention: «...[ce] n'est pas une convention de conservation au sens propre du terme, mais un traité de pêche réglementant l'exploitation [de la baleine]»; *Droit International de l'Environnement* (Pédone, 1983), at 255. Indeed, Art. V(2) of the Convention provides for the optimum utilisation of whale resources; see also the 1957 Interim Convention on Conservation of North Pacific Fur Seals (Preamble).

hamper equitable utilisation or undermine maximum exploitation; pollution rules remained in sum 'a mere appendage to the regulation of utilization'⁽¹⁶⁾. Consequently, States recognised the duty to prevent or suppress only those *injuries*⁽¹⁷⁾:

- (a) resulting from human activities⁽¹⁸⁾;
- (b) having *serious*⁽¹⁹⁾, *substantial*⁽²⁰⁾, or even *definitive* ⁽²¹⁾ consequences on the environment *of other States*⁽²²⁾;
- (c) provided that those injuries, together with the link between a given action⁽²³⁾ and the injuries, could be established by *clear and convincing evidence*⁽²⁴⁾.

(16) Hohmann, *Precautionary Legal Duties*, 33.

(17) *Trail Smelter* case (Final Award), 35 *AJIL* 684, at 716; *Lac Lanoux* arbitration, refers simply to alteration (of waters); 24 *ILR* (1957), 101, at 129.

(18) The duty of prevention does not extend to 'detrimental effects caused by environmental factors that cannot be reasonably said to have been caused by human conduct'; Schachter, 'The Emergence of International Environmental Law', 44 *JIA* (1991), 457, at 464. Such condition of course is tempered with the difficulty to identify the exact causes of the harm and attribute it exclusively to human activity regardless of any natural factors; see *infra* 3/iii. Causality Link Between the Object and the Harm/Risk.

(19) *Trail Smelter* case and *Lac Lanoux* arbitration, *supra* n.17.

(20) 1966 Helsinki Rules, *op.cit.*, Art. X(1)(a); States are only *recommended* to abate damage which is not substantial; Art. X(1)(b); see also ILA 1982 Rules on Water Pollution in an International Drainage Basin, Art. 1; ILA 1982 Montreal Rules of International Law Applicable to Transfrontier Pollution, Art. 3; 1987 IDI Cairo Draft Resolution on air pollution across national frontiers, Art. 9, in 62 *Ann.IDI* (1987-I), 188.

(21) *Lac Lanoux* arbitration, *supra* n.17, at 123.

(22) *Trail Smelter* case, *supra* n.17; *Lac Lanoux* arbitration refers to downstream States, *supra* n.17, at 123, and 1966 Helsinki Rules to Co-basin States; Art. X. The transboundary harm principle finds also application in inter-cantons and inter-Länder disputes; see *supra* Chap. 2, Permanent Sovereignty over Natural Resources, n. 200 (CR), and *Donauversinkung* case, *infra* n. 24, and further references on early cases in Wildhaber, 'Die Öldestillieranlage Sennwald und das Völkerrecht der Grenzüberschreitenden Luftverschmutzung', 31 *ASDI* (1975), 97, at 104 *et sequ.*

(23) The situation is less clear in case of purely economic consequences resulting from environmental interference; see Schachter, *supra* n.18, at 464.

(24) *Trail Smelter* case and *Lac Lanoux* arbitration, *supra* n.17. No reference is made to a clear established causal link between an activity and the injury in 1966 Helsinki Rules, which focus on the result (pollution) rather than the source (activity causing pollution). Rather, the Rules link the duty of prevention to the demonstration of the *inequitable* and *unreasonable* use of the shared resources (Art. X(1) combined with Arts. IV and VII). Accordingly, the duty to prevent pollution would (a) be conditioned by the demonstration that such pollution infringes the right of equitable utilisation of co-basin States, and (b) find its limits in the right of equitable utilisation of the State responsible. States would thus be expected to tolerate even significant environmental harm as long as such harm results from an equitable use of the shared resources; *ILA-Report of the Fifty-second Conference, held at Helsinki, 1966* (Great Britain, 1968), 499. See also Lammers' theory of the 'mitigated-no-substantial harm', that takes into consideration factors such as socio-economic or technical costs involved in preventing or abating pollution and the harm caused, to temper the operation of the no substantial harm principle so as not to favour in excess the victim State; 'Balancing the Equities', in Dupuy (ed.), *The Future of International Law of the Environment*, Hague Academy of International Law Workshop 1984 (Martinus Nijhoff, 1985), 153, at 155 *et sequ.*

Such conditional approach has been criticised for failing to dissociate the no substantial harm and equitable utilisation principles, and for introducing dual standards of preventive environmental duties, (*continued*)

Where not appended to particular rules of exploitation or allocation, largely because the 'common resource' was not subjected to such intensive and competitive exploitation, 'environmental' rules have often remained 'soft' and reactive, essentially concerned with issues of reparation of damage and liability⁽²⁵⁾; whereas the solution to pollution would still rest upon the assimilative and self-regenerative capacity of the environment itself, following the slogan «[t]he solution of pollution is dilution»⁽²⁶⁾.

along those already set in *Trail Smelter*, see Handl, 'National Use of Transboundary Air Resources: The International Entitlement Issue Reconsidered', 26 *NRJ* (1986), 405, at 416 *et sequ.*; Dickstein, 'International Lake and River Pollution Control: Questions of Method', 12 *Columbia JTL* (1973), 487, at 497; Ando, 'The Law of Pollution Prevention in International Rivers and Lakes', in Zacklin & Caflisch (eds.), *The Legal Regime of International Rivers and Lakes* (Martinus Nijhoff, 1981), 331. Birnie & Boyle underline that the 1966 Helsinki rules were the only international codification to make the obligation to prevent serious environmental harm conditional on equitable balancing; Birnie & Boyle, 228-29. They point out that, although such approach appears to have been originally followed by the International Law Commission in its attempt of codification of the non navigational uses of international watercourses (McCaffrey, Second Report on the Law of the non-navigational uses of international watercourses, A/CN.4/339 and Add.1 and 2, 1986 *YbILC* Vol. II Pt. 1, 87, at Paras. 184 *et sequ.*; Schwebel, Third Report on the Law of the non-navigational uses of international watercourses, A/CN.4/348 and Corrigendum, 1982 *YbILC* Vol. II Pt. 1, 65, Paras. 156 *et sequ.* The latter had finally opted for the opposite view, i.e. the duty not to cause appreciable environmental harm as a limit to equitable use of shared resources (see draft Art. 8 (now Art. 7)), 1988 *YbILC* Vol. II Pt. 2, at 36. The Commission recognised however that in some instances, equitable utilisation might depend on a tolerance by some watercourse States of a 'measure of harm', but considered that, in that case, a special agreement between the source and victim States was necessary; *ibid.* The Commission relied *inter alia* on the *Fisheries Jurisdiction* cases, where the International Court of Justice clearly asserted that the preferential rights of a coastal State are to be limited, among others things, according to «the rights of other States and the needs of conservation...»; *Fisheries Jurisdiction (United Kingdom v. Iceland, Federal Republic of Germany v. Iceland)*, *Merits*, *ICJ Rep.* 1974, 3, at 31. This option was retained in the 1997 UN Convention on the Non-Navigational Uses of International Watercourses, Art. 7. See also of the 1992 ECE Watercourses Convention, Arts. 2 and 3. In the so-called *Donauversinkung* case (Sinking of the Danube) (*Württemberg & Prussia v. Bade*) (1927), a German Staatsgerichtshof held that the duty to abstain from injurious transboundary interference, as it is increasingly recognised in *international law*, was primarily related to *artificial* alteration in the flows of the river. The German Court underlined nonetheless that its conclusion did not exempt States for the responsibility «to do what civilized States nowadays do in regard to their rivers», even with regard to natural flows; extracts of the case in 4 *Annual Digest of Public International Law Cases 1927-1928* (1931), 128, at 131-132.

(25) Characteristic of such after-the-fact approach are the early norms concerning marine pollution, which cover 'pure threat'. Thus for instance, under the 1969 Intervention Convention, Art. V), the onus lies on the intervening coastal State to prove that the intended intervention is both necessary and proportionate to prevent, mitigate or eliminate grave and actual, or imminent danger; see *infra* Causality Link. Likewise, the 1969 Civil Liability Convention defines preventive measures as "reasonable measures taken" *after* an incident has occurred to prevent or minimise pollution damage, Para. 7. Surprisingly, whereas both the 1973/78 MARPOL, and the 1972 Oslo Convention on Marine Pollution from Ships and Aircraft, are based on the acknowledgement that «the capacity of the sea to assimilate wastes and render them harmless, and its ability to regenerate natural resources, is not limited» (1973/78 MARPOL, preambular Para. 2), both fail to impose an absolute ban on dumping of wastes. Rather, they apply to a restricted category of disposal (deliberate actions to the exclusion of incidental actions; 1973/78 MARPOL Art. III; 1972 Oslo Convention Art. 19) and allows for exceptions.

(26) Clark, as quoted in Stebbing, 'Environmental Capacity and The Precautionary Principle', 24 *MPBull.* (1992), 287, at 288. Thus for instance, early measures to abate air pollution consisted in the construction of tall industrial chimneys, to allow for the dispersion of industrial smokes in high altitude, hence displacing the environmental problem without resolving it; Kiss & Shelton, *Traité de Droit Européen*, 8; see also Schwebel's provision for the 'self-purification' of flowing waters, 1979 *YbILC* Vol. (continued)

Such 'precaution' deficit comes as no surprise considering the general context of economic, industrial, scientific and technological development. Besides, paradoxically, the state of scientific and technological progress did not allow yet for an early detection of the 'unsustainability' of the rate of exploitation. As a certain 'environmental awareness' grew, international environmental law progressively shifted away from a 'law of environmental *allocation*'⁽²⁷⁾ towards a 'law of environmental *protection*'; as a result of it, most original regimes of early 'environmental' treaties were subsequently amended to serve a more protective function.

*b. The 1972 Stockholm Declaration on the Human Environment:
Institutionalisation of Prevention*

The growing awareness of the inadequacy of a 'reactive' environmental policy in the early 1970s, illustrated by a series of man-made environmental disasters and alarming forecasts, created a favourable context to the endorsement of a more cautious attitude towards the ecosystem. The 1972 Stockholm Conference on the Human Environment constituted a milestone in the emergence of 'modern environmental law' in two major respects⁽²⁸⁾:

- 1) it introduced a broader environmental perspective, supplementing the classic concern for utilisation of resources with concern for the resources *per se* (ecological viability) and for future generations (intergenerational equity)⁽²⁹⁾;
- 2) it marked the departure from sectoral and bilateral towards a more global approach.

Consequently, the no substantial transboundary harm principle and related duty to take preventive measures emerged beyond the context of good-neighbourliness, as a measure for the benefit of the international community as a whole⁽³⁰⁾. On the other

II Pt. 1, 143, at 149.

(27) Hohmann, *Precautionary Legal Duties*, at 11-12.

(28) See *infra* Chap. 1/3. Evolutionary Perspective of Sustainable Development, and Chap. 2/2/iii. Sovereignty over Environmental Resources and Environmental Policies versus Globalisation of Environmental Standards and Policies.

(29) Such change of perspective is particularly clearly reflected in 1972 Stockholm Declaration on the Human Environment, Princ. 1 and 2.

(30) No substantial harm principle, 1972 Stockholm Declaration on the Human Environment, Princ. 21; see Birnie & Boyle, 92; Charney, 'Third States Remedies for Environmental Damage to the World's Common Spaces', in Francioni & Scovazzi, *International Responsibility for Environmental Harm* (Graham & Trotman/Martinus Nijhoff, 1991) Chap. 6, at 162 *et sequ.* On the conception of the duty of prevention in the field of the 'common' environment as an *erga omnes* obligation, see *supra*, Chap. 2/4/ii/c. Limits Arising from General Environmental Considerations.

hand, the preventive approach has essentially remained within the existing scientific and technological parameters, and entails no reconsideration thereof⁽³¹⁾.

The preventive approach inspired most environmental rules in the 1970s and 1980s, concerned both with the anticipation of the risk and minimisation of environmental pollution⁽³²⁾, and with the rational use of natural resources⁽³³⁾. The principle of prevention also laid at the centre of the work of the International Law Commission on International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law, and was consecrated as one basis for such a responsibility in the various set of principles proposed by the Commission⁽³⁴⁾. The debate on that issue

(31) Princ. 21 makes no express reference to the relevant parameters to define the harm to be prevented, such as scientific proof or objectiveness; see *infra* 3/ii. Risk-Harm to be Averted/Minimised; nevertheless, as a rule, the adoption of preventive environmental measures has been consistently subordinated to available conclusive scientific findings. Admittedly, the central point of discussion throughout the drafting process of Princ. 21 was the consecration of permanent sovereignty over natural resources, and not the no-harm principle; see *supra* Chap. 2/4/ii/a. Equitable Utilisation, *Sic Utere Tuo* and Related No Substantial Transboundary Harm Principles; also Sohn, 'The Stockholm Declaration on the Human Environment', 14 *Harvard ILJ* (1973), 433, at 485 *et sequ.* Besides, principle 18 states clearly the prominent role of science and technology in the identification, avoidance and control of environmental risks; the promotion of a science-based *preventive* policy was confirmed by 1982 Nairobi Declaration, Para. 9.

(32) This is the case of most regional and international marine pollution documents, like for instance the 1972 Oslo Convention on Marine Pollution from Ships and Aircraft, Art. 2; 1972 London Convention on Dumping of Wastes, Arts. I, II; 1973/78 MARPOL, Art. 1; 1974 Baltic Sea Convention, Art. 3; 1982 UNCLOS, Arts. 194, 207 and 208. It is also true of most of UNEP Regional Seas Conventions, namely: 1976 Barcelona Convention on Mediterranean Sea, Art. 4; 1978 Kuwait Convention on the Marine Environment in the Arabian Gulf, Art. 3; 1983 Cartagena Convention on the Marine Environment in the Wider Caribbean Region, Art. 4(1); 1985 Nairobi Convention on the Marine Environment in East Africa, Art. 4(1); and 1986 Noumea Convention on the Environment in the South Pacific, Art. 5(1). See also more recent documents, such as the 1992 ECE Watercourses Convention, Arts. 2, 3; the 1992 ECE Industrial Accidents Convention, Arts. 2, 3.

(33) See for instance 1968 African Convention on Nature, Preamble, Arts. II, IV-VII; 1972 World Heritage Convention; Preamble and arts 4, 5; 1973 CITES, preambular Para. 1; 1973 Polar Bears Agreement; Art. II; 1974 Nordic Convention on the Protection of the Environment, Art. 1; 1978 Amazonian Treaty, Art. 1; 1979 OECD/Yugoslavia Declaration of Anticipatory Environmental Policies; 1979 Bonn Convention on the Conservation of Migratory Species, Arts. III(2) and XI(3); 1980 CCAMLR, Art. II; 1985 ASEAN Agreement on the Conservation of Nature, Art. 1(1); 1985 OECD/Yugoslavia Declaration on Environment: Resource for the Future; 1986 US Third Restatement of the Law, § 601. See also more recently: 1989 Vienna Concluding Document on CSCE Third Follow-up Meeting, section on "Cooperation in the Field of the Economics of Science and Technology and the Environment", Para. 24.; 1991 Alps Convention, Art. 2; 1993 North American Agreement of Environmental Cooperation, Arts. 1 and 10.

(34) The first set of Draft Articles on International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law (hereafter: First Draft Articles on International Liability (1988)) are reproduced in 1988 *YbILC* Vol. II Pt. 1, 254-55; the second (revised) version (hereafter: 1989 Revised Draft Articles on International Liability) is reproduced in 1989 *YbILC* Vol. II Pt. 1, 134; the draft articles have been further substantially modified in 1990 (hereafter: 1990 Draft Articles on International Liability), reproduced in 1990 *YbILC* Vol. II Pt. 1, 105 *et sequ.* The latest version provisionally adopted by the ILC reproduced in the Report of the International Law Commission to the General Assembly, GAOR Fifty-first Session, Suppl. No 10, A/51/10, at 238 *et sequ.* (hereafter: 1996 Draft Articles on International Liability). The principle of prevention has also inspired the work of the Commission in the context of the Non Navigational Use of International Watercourses (*supra* n. 24), most notably the utilisation of
(continued)

within the Commission offers enlightening clarification with regard to the generally intended implications and limits of the principle of prevention.

Duties related to the principle of prevention can be classified into two broad categories⁽³⁵⁾: unilateral duty of due diligence⁽³⁶⁾, and procedural duties. The latter may be further divided into two major categories: (1) duty of information and notification, and (2) duty of impact assessment. Although conditioned by the interpretation given to the unilateral duty, and most notably the selection of the relevant parameters for the appreciation of the risk/harm to be averted, the procedural duties entail similar implications and are confronted with similar limits under a preventive and a precautionary approach⁽³⁷⁾.

The unilateral preventive measures, otherwise referred to as obligation of due diligence⁽³⁸⁾, consist essentially of legislative and administrative measures to be taken by a government without prior consultation with other States, to prevent *ex ante* the risk and minimise *ex post*, the impact of significant transboundary harm⁽³⁹⁾. It appears from the Draft Articles and related comments that the duty of due diligence is confined to *objectively* perceptible risk, i.e. a risk that is «appreciable according to the normal criteria or standards for the use of the things which are the object or product of the activity, or the result of the situations created»⁽⁴⁰⁾. The duty of due diligence commits State to a certain conduct confined to risk objectively predictable *inter alia* in the light of the state of scientific knowledge⁽⁴¹⁾. Therefrom flows the idea that the concept of

transnational waters...), and was eventually incorporated in the 1997 UN Convention on the Non-Navigational Uses of International Watercourses, Art. 7(1).

(35) Such qualification had already been adopted by the Arbitral Tribunal in the *Trail Smelter* arbitration *supra* n. 17, and is usually -though not unanimously- used to classify the various implications of the duty of prevention; see for instance 1978 UNEP Draft Principles on Shared Natural Resources, Princ. 4-6; 1991 *YbILC* Vol. II Pt. 1, 81. See also Wildhaber, *supra* n. 22.

(36) For an exemplary list of preventive procedural duties, see the 1992 ECE Industrial Accidents Convention, Arts. 2, 3, and Annex IV.

(37) See *infra* 4. Operational Implications of the Precautionary Principle, and 5. Limits Inherent in the Precautionary Principle.

(38) 1992 *YbILC* Vol. II Pt. 1, Para. 11.

(39) Recommendatory provisions on prevention, Art. I, in 1992 *YbILC* Vol. II Pt. 1, 67.

(40) 1988 *YbILC* Vol. II Pt. 1, Para. 26, and Art. 1, at Para. 17; on qualification of the risk in the context of ILC Draft articles on international responsibility and non navigational used of international watercourses, see *infra* n. 129.

(41) None of the documents mentioned *supra* n. 32 and 33 rules out expressly scientific uncertainties or the state of technology as justification to the postponement of environmental measures. On the contrary, the need for conservation or anti-pollution measures are constantly based on reliable scientific data. The 1968 African Convention on Nature for instance, requires scientifically-based conservation and management plans, Arts. II, VI; the 1985 ASEAN Agreement on the Conservation of Nature calls upon States to take the measures necessary to ensure the sustainable utilisation of natural resources 'in accordance with scientific principles', Art. 1(1); 1982 UNCLOS provides for the conservation of living
(continued)

prevention is a 'relative notion', and that in some circumstances, 'it might be impossible even to forecast the consequences of a particular activity'⁽⁴²⁾.

The prevention principle has also influenced the environmental policy of the European Community⁽⁴³⁾, even before such policy -and the principle of prevention itself- were formally incorporated into the EEC Treaty⁽⁴⁴⁾. It has since been repeatedly

resources taking into account the best scientific evidence available to it, Art. 61(2). See *infra* 4/i.

Unilateral Duty of Due Diligence. In a similar way, for those treaties which adopt the system of red-appendix (endangered species) or black/grey-list system (polluting substance which use is banned/subjected to authorisation), it is usually the task of a scientific commission to establish/amend those list/appendix, on a basis of conclusive 'best scientific evidence available'; see for instance 1979 Bonn Convention on the Conservation of Migratory Species, Art. III; 1989 Basel Convention on Transboundary Movement of Hazardous Wastes, Art. 17. Hence, in that respect, the list/appendix system combines prevention and precaution; see *infra* n. 150 and 151.

(42) 1992 *YbILC* Vol. II Pt. 2, Para. 302.

(43) The principle of prevention and reduction of pollution, and rational management of natural resources had already been laid down in the First EEC Programme of Action on the Environment (1973-1976, [1973] OJ C112/1), established in the aftermath of 1972 Stockholm Conference on the Human Environment, and was repeatedly reasserted, directly or by reference to documents asserting it, in the subsequent Action Programmes on the Environment: Second Action Programme (1977-1982, [1977] OJ C139/1); Third Action Programme (1983-1986, [1983] OJ C46/1); Fourth Action Programme (1987-1992, [1987] OJ C328/1), Fifth Action Programme (1993-2000, [1993] OJ C138/1). The preventive role assumed by EC environmental policy was particularly emphasised in Third Action Programme, and clearly reflected in the Restatement of the Objectives and Principles of a Community Environmental Policy, originally appended to the Second Programme, and later annexed to the Fourth. Although these Action Programmes, formulated by the Commission and approved by the Council, are non-binding documents, they are intended to spell out the basic consensus of member States about the community action on environmental matters (originally to compensate the lack of express and well defined mandate in the treaty of Rome); on that ground, they are indicative of the general trend in European environmental policy; Jans, *European Environmental Law* (Kluwer Law International, 1995), 273-75; Krämer, *Focus on European Environmental Law* (Sweet & Maxwell, 1992), 26.

A series of directives and regulations taken in application of the prevention principle confirm such trend; see for instance Regulation 259/93/EEC, on the supervision and control of shipments of waste within, into and out of the European Community, [1993] OJ L30; Regulation 1210/90/EEC, on the European Environment Agency and the European Environment Information and Observation Network, [1990] OJ L120/1/EEC; OJ L175; Directive 85/339/EEC, on Packaging of Liquids for Human Consumption, [1985] OJ L176/18; Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, [1985] OJ L175/40, as amended by Council Directive 97/11/EC, [1997] OJ L73/5; Directive 82/501/EEC, on the Major Incident Hazards of Certain Industrial Activities (Post-Seveso Directive), [1982] OJ L230/1 (later amended); Directive 76/769/EEC, relating to Restrictions on the Marketing and Use of Certain Dangerous Substances and Preparations, [1976] OJ L262 (later amended).

Prevention was erected as the highest priority of the Community new Strategy for Waste Management, set out in 1989; SEC (89) 934. It was subsequently reiterated in the framework Directive 75/442/EEC on Wastes ([1991] OJ L377/48), and in other directives concerning more specific wastes; *inter alia* Directive 91/689/EEC, on Hazardous Waste ([1991] OJ L377/20 (later amended)); Directive 91/62/EEC, on Packaging and Packaging Waste ([1994] OJ L365); Directive 75/439/EEC. Besides, the Regulation 259/93/EEC on the Supervision and Control of Shipment of Waste Within, Into or Out of the European Community (Basel Regulation), [1993] OJ L30/1 (later amended) has been largely influenced by various prevention-based pieces of legislation on transfrontier shipments of waste binding upon the EC, and most notably the 1989 Basel Convention on Transboundary Movement of Hazardous Wastes, and 1989 ACP-EEC Lomé IV, Art. 39.

(44) The European Community had already enacted several environmental measures despite of the lack of provision that expressly provided for its competence in that field; most of them were based on 1957 EEC
(continued)

reasserted as a fundamental principle of European environmental policy⁽⁴⁵⁾. Article 130R (1) and (2) of 1986 EC Treaty reads:

(1) Acting by the Community relating to environment shall have the following objectives:

- to preserve, protect and improve the quality of the environment;
- to contribute towards protecting human health;
- to ensure a prudent and rational utilisation of natural resources.

(2) Action by the Community relating to the environment shall be based on the principles that preventive action should be taken, that environmental damage should, as a priority be rectified at source, and that the polluter should pay. Environmental protection requirements shall be a component of the Community's other policies.

(...)

The competence of the European Community to take preventive environmental measures remains confined to those cases where the need for such measures is supported by sufficient technological and scientific evidence⁽⁴⁶⁾. Article 130R further provides:

(3) In preparing its action relating to the environment, the Community shall take account of:

- available scientific and technical data;
- ... (omitted)

Even though Article 130R(3) might express more of desire of Member States to limit the competence of the Community in the field of the environment rather than it reflects a narrow interpretation of the preventive approach, the fact remains that, under the 1986 EC Treaty, preventive measures shall follow and not anticipate scientific and technical knowledge⁽⁴⁷⁾.

Treaty, Arts. 100 and 235. A formal legal basis to community action on environmental issues was provided by the 1986 SEA (Title VII EC Treaty); Jans, *European Environmental Law* (Kluwer Law International, 1995), 20 *et sequ.*; Kiss & Shelton, *Traité de Droit Européen*, 20 *et sequ.*, 40 *et sequ.*; Krämer, 'L'Acte Unique Européen et la protection de l'environnement', *Revue Juridique de l'Environnement* (1987-4), 449; see also Hancher, 'EC Environmental Policy - A Pre-cautionary Tale?', in Freestone & Hey, *Precautionary Principle and International Law*, Chap. 11; Vandermeersch, 'The Single European Act and the Environmental Policy of the European Economic Community', 12 *ELR* (1987) 407. More particularly on the role assumed by the European Court of Justice in the development of European environmental law, see Lord, 'Bootstrapping an Environmental Policy from an Economic Covenant: the Teleological Approach of the European Court of Justice', 29 *Cornell ILJ* (1996), 571.

(45) The 1992 EU Treaty, Art. 130R(1) & (2) and the 1992 European Economic Area Agreement (Preamble), both of which endorse the principle, to be combined however, with the precautionary principle; *infra* n. 67.

(46) Such an interpretation of a state-of-knowledge provision, *a priori* justifiable under 1986 SEA regime, had been ruled out by the European Court of Justice in 1990, first with regard to health-related preventive measures, and then with regard to environmental related preventive measures (1993); express referenceto the precautionary principle in the 1992 EU Treaty also excludes such a reading of 130R(3); Jans, *European Environmental Law* (Kluwer Law International, 1995), 20; references to the cases and consideration of 1992 EU Treaty provision, *infra* n. 65 to 67.

(47) This trend is largely confirmed by the use of technical standards in most environmental directives, with a clause allowing for adaptation to technological and scientific knowledge; see for instance Directive (*continued*)

No mention of the anticipation of scientific technical knowledge is made either in the 1987 WCED Report. On the contrary, the WCED integrates the idea of 'limitations imposed by the state of technology' in its often quoted definition of sustainable development⁽⁴⁸⁾. On the other hand, the cornerstone concept of 'optimum sustainable yield' in the 1986 WCED-EG Legal Principles for Environmental Protection and Development allows for a certain margin of safety in the setting of the upper level of exploitation and pollution, to compensate, *inter alia*, for scientific uncertainty. Optimum sustainable yield does not require, however, that preventive measures be taken *in spite of* such uncertainty⁽⁴⁹⁾.

86/278/EEC, on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture [1986] L1981/6/EEC (later amended); Directive 80/68/EEC, on the protection of ground water, [1980] OJ L20/43 (later amended).

(48) *Our Common Future* (Oxford University Press, 1987), 43 (emphasis added):

«Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and
- *the idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet present and future needs.*»

(49) 1986 WCED-WG Legal Principles for Environmental Protection and Development, Arts. 3 to 7. In similar terms, the 1982 World Charter for Nature advocates the maintenance of an *optimum sustainable productivity* of natural resources, Para. 1, and the 1980 World Conservation Strategy set forth some conservative management objectives which should allow for 'error, ignorance and uncertainty' (Chap. 7, Para. 2); the updated strategy for a sustainable living echoes the 1980 WCS in its regard for the exploitation of natural resources (1991 *Caring for the Earth*, at 41).

The 1990 Draft European Conservation Strategy, which reflects most concerns expressed in the 1987 WCED Report and 1980 WCS, contains no reference to optimum sustainable yield. On the contrary, it tends to rely on the maximum and minimum level of tolerance of the ecosystem (see for instance, Art. XIII: maximum acceptable level of wastes). So does the final version of the 1990 Draft European Charter on Environmental Protection and Sustainable Development, although it refers to documents that endorse the principle of optimum sustainable yield, Paras. 10, 11d. The maximum acceptance level of wastes is also replaced by the reliance on best methods in the light of scientific and technological progress in the process of collecting, treating and disposing wastes of any kinds (Para. 14). See also ILC's 1987 Draft Articles on the Non-Navigational Uses of International Watercourses, providing for the *optimum utilisation*, i.e. 'the maximum possible benefit for all watercourse States while minimising the detriment to each'. The 1997 UN Convention on the Non-Navigational Uses of International Watercourses strives at 'an *optimal* and sustainable utilization of and benefit from' international watercourses; Art. 5(1).

Reference to the optimum sustainable yield was already contained in previous documents, such as the 1958 High Seas Conservation Convention, Art. 2; 1972 Antarctic Seals Convention, preambular Para. 4; US-Japan 1972 Convention for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment; Art. III(2). Departing from the majority of international fisheries agreements, striving to achieve the maximum sustainable yield of stock being fished, the 1980 CCAMLR strives at the conservation of the maximum sustainable yield (Art. II(3)(c)); in the same way, 1982 UNCLOS combines the *conservation of a maximum sustainable yield* (Art. 61(3)) of the living resources, and the *optimum utilisation* of the living resources (Art. 62(1)); on the contrast between maximum and optimum sustainable yield, see Birnie & Boyle, 437 *et sequ.*; Macdonald, 'Appreciating the Precautionary Principle as an Ethical Evolution in Ocean Management', 26 *ODIL* (1995), 255, at 217 *et sequ.*

c. *Precaution and Sustainable Development*

Early deliberations on the necessity to adopt a precautionary approach in relation to certain environmental issues occurred at series of International Ministerial Conferences on the Protection of the North Sea⁽⁵⁰⁾. The Conferences, gathering North Sea littoral States plus the EC Commission⁽⁵¹⁾, were convened in the light of the inadequacy of the existing regional system for the protection of the North East Atlantic, as established in the early 1970s⁽⁵²⁾, to solve the pervasive problem of pollution of North Sea. Whilst the first Ministerial Conference seems to have adopted a classic preventive approach to pollution⁽⁵³⁾, a decisive move towards a precautionary approach was taken at the 1987 London Ministerial Conference. The resulting 1987 London Ministerial Declaration on the North Sea contains no more than three references to precautionary action:

... [I]n order to protect the North Sea from possibly damaging effects of the most dangerous substances, a *precautionary approach* is necessary which

(50) A series of Conferences on the Protection of the North Sea were held at the Ministerial level, in Bremen (1984), London (1987), The Hague (1990), and Esbjerg (1997); two intermediate Ministerial Meetings were convened, in Copenhagen, 1993, and Bergen, 1997; at the issue of each Conference, the Ministers issued a joint Declaration recorded as Ministerial Declaration, and usually referred to after the name of the host town. Those Declarations, and any further texts related to the North Sea, or other Paris Commission (PARCOM) or Oslo Commission (OSCOM) Recommendations or Decisions referred to in this sub-title are reproduced in Freestone & Ijlstra (eds.), *The North Sea; Basic Legal Documents on Regional Environmental Co-operation* (Graham & Trotman/Martinus Nijhoff, 1991) unless stated otherwise.

Generally on precautionary action within the context of North Sea Conferences, see Freestone, 'The Precautionary Principle'; Gündling, 'The Status in International Law of the Precautionary Action', in Freestone & Ijlstra (eds.), *The North Sea: Perspectives on Regional Environmental Co-operation*, Special Issue of the International Journal of Estuarine & Coastal Law (1990) (hereafter Freestone & Ijlstra (eds.), *The North Sea*), Chap. 3. See also in 24 *MPBull.* (1992): Earll, 'Common Sense and the Precautionary Principle - An Environmentalist's Perspective' (182 *et sequ.*); Peterman & M'Gonigle, 'Statistical Power Analysis and the Precautionary Principle' (231 *et sequ.*); Stebbing, 'Environmental Capacity and the Precautionary Principle', 24 *MPBull.* (1992), 287. For a brief overview of the rules applicable to the North Sea until 1990, see Birnie, 'The North Sea Legal Regime', 16 *Ocean & Shoreline Management* (1991), 177.

(51) Belgium, Denmark, Federal Republic of Germany, France, the Netherlands, Norway, Sweden and the UK as well as the Commission of the European Communities took initially part in the negotiation process; Switzerland, Oslo and Paris Commissions attended the 1990 Hague Conference as observers.

(52) 1972 Oslo Convention on Marine Pollution from Ships and Aircraft, and 1973 Paris Convention on Marine Pollution from Land-Based Sources

(53) Regardless of some inconsistencies reported between the German and English versions, the 1984 Bremen Ministerial Declaration on the North Sea is worded in terms of prevention and anticipation of the risk, and contains no reference to a precautionary approach or principle; the Ministers thus reaffirm their commitment to «timely preventive measures to maintain the quality of the North Sea and to closely cooperate herein» (Preamble), and declare that «damage to the marine environment can be irreversible or remediable only at considerable expense and over long periods and that, therefore, coastal states and the EEC *must not wait for proof of harmful effects before taking action*», A7, emphasis added. Linguistic inconsistencies are discussed by Gündling, 'The Status in International Law of the Precautionary Action', *supra* n. 51, at 24-25.

may require action to control inputs of such substances even before a causal link has been established by absolutely clear scientific evidence;

...[B]y combining(...) approaches based on emission standards and environmental duality objectives, a more *precautionary approach* to dangerous substances will be established;

[The parties] [t]herefore agree to (...) accept the principle of safeguarding the marine ecosystem of the North Sea by reducing polluting emissions of substances that are persistent, toxic and liable to bioaccumulate at the source by the use of the best available technology and other appropriate measures. This applies especially when there is reason to assume that certain damage or harmful effects on the living resources of the sea are likely to be caused by such substances, even where there is no scientific evidence to prove a causal link between emissions and effects ('the *principle of precautionary action*')⁽⁵⁴⁾.

Albeit non-binding statements issued by a political forum, the North Sea Ministerial Declarations embody nonetheless a strong political commitment to adopt a precautionary approach with respect of marine pollution and fisheries management to be carried out in good faith⁽⁵⁵⁾. More importantly, these declarations have influenced the elaboration of a number of European and international legal environmental documents that involved States and entities that took part in the North Sea negotiations⁽⁵⁶⁾.

The legal process of renegotiation of the North East Atlantic regime⁽⁵⁷⁾ (including the North Sea) by North East littoral States has, undoubtedly, been influenced by the

(54) 1987 London Ministerial Declaration on the North Sea, respectively Arts. VII, XV(ii) and XVI(1) (emphases added). A similar endorsement of the principle of precaution is contained in the 1990 Hague Ministerial Declaration on the North Sea, allegedly in the more restricted context of hazardous substances; on that controversial point, see Cameron & Abouchar, 'The Precautionary Principle', at 16-17; Hey, 'The Precautionary Approach: Implications of the Revision of the Oslo and Paris Conventions', 15 *Marine Policy* (1991), 244, at 245. In the 1995 Esbjerg Ministerial Declaration on the North Sea reiterates, Ministers not only reiterate their support to the precautionary principle with respect to the prevention of pollution of the North Sea by hazardous substance as they did at the previous Conference (Para. 17), but indeed endorse it as the guiding principle for achieving a responsible management of fisheries (Para. 16); 1997 Esbjerg Ministerial Declaration on the North Sea is posted on the Conference website @ <<http://odin.dep.no/md/publ/conf/esbjerg.html>>. At the issue of their latest Intermediate Meeting on the Integration of Fisheries and Environmental Issues, held in Bergen on March 1997, the States Ministers reaffirmed their firm commitments made at the previous Conferences, albeit «[r]ecognizing that further problems result from insufficient application of a precautionary approach in management regimes»; Statement of Conclusions, preambular Para. 8; the Statement of Conclusions is posted on the Conference website @ <<http://odin.dep.no/md/publ/conf/soc.html>>.

(55) Van der Mensbrughe, 'Legal Status of International North Sea Conference Declarations', in Freestone & Ijlstra (eds.), *The North Sea*, Chap. 2. See also Boyle, 'Land-based Sources of Marine Pollution', 16 *Marine Policy* (1992), 20.

(56) Generally on the catalytic role of 'political' resolutions, *supra* Chap. 1/2/iii. Legal Framework.

(57) The 1972 Oslo Convention on Marine Pollution from Ships and Aircraft and 1974 Paris Convention on Marine Pollution from Land-Based Sources. All parties to the Oslo and Paris Conventions are entities involved in the North Sea negotiations save from Switzerland, Iceland, Ireland, Spain and Portugal; Finland is only a party to Oslo Convention, and the European Community to Paris Convention; Ehlers, 'The History of the International North Sea Conferences', in Freestone & Ijlstra (eds.), *The North Sea*, Chap. 1; Hayward, 'The Oslo and Paris Commissions', *ibid.*, Chap. 8. On the relationship between
(continued)

outcome of the North Sea Ministerial Conferences held in parallel. The resulting 1992 OSPAR Marine Environment Convention⁽⁵⁸⁾, which attributes the failure of the previous documents to appropriately control the source of pollution to the lack of a precautionary approach⁽⁵⁹⁾, elevates the principle of precaution to the rank of general *mandatory* obligation,

«by virtue of which preventive measures are to be taken where there are reasonable grounds for concern that substances or energy introduced, directly or indirectly, into the marine environment may bring about hazards to human health, harm living resources and marine ecosystems (...), even when there is no conclusive evidence of causal relationship between the inputs and the effects»⁽⁶⁰⁾.

The Paris Commission has also incorporated the principle of precaution as a policy objective by means of a (non-binding) Recommendation 89/1 on the Principle of Precautionary Action, which largely echoes the 1987 London Declaration, Paragraph XVI(I)⁽⁶¹⁾. The Oslo Commission integrated the principle through prior justification procedures⁽⁶²⁾.

The first all-European political commitment to the principle of precaution with regard to the environment in general came in 1990 at the Regional Preparatory Meeting for the Earth Summit held in Bergen, Norway. Gathered to discuss an 'Action for Our Common Future' for the upcoming Earth Summit, the thirty-four States of the Economic Commission for Europe and North America opted for a inward-looking, precaution-oriented approach to development and environment. The final Declaration on Sustainable Development is the first Ministerial Declaration to refer *expressis verbis* to the precautionary principle in general (outside the context of marine policy); it states:

Oslo and Paris Commissions, and the North Sea Ministerial Conferences, see Hey, 'The Precautionary Approach: Implications of the Revision of the Oslo and Paris Conventions', 15 *Marine Policy* (1991), 244, at 248 *et sequ.*

(58) The Convention is also referred to as the OSPAR Convention, in reference to the 1972 Oslo Convention on Marine Pollution from Ships and Aircraft and 1974 Paris Convention on Marine Pollution from Land-Based Sources it is intended to supersede, at least as between the States party. For a detailed commentary of the Convention, see for instance Hey *et al.*, 'The 1992 Paris Convention on the Marine Environment of the North-East Atlantic: A Critical Analysis', 8 *IJ Marine & Coastal L* (1993), 1; Juste, 'La Convention pour la protection du milieu marin de l'Atlantique Nord-Est', 97 *RGDIP* (1992), 365.

(59) Preamble.

(60) Art. 2(2)(a).

(61) Recommend. 89/2, on the Use of Best Available Technology also refers to the precautionary principle.

(62) Decision 89/1, On the Reduction and Cessation of Dumping of Industrial Wastes at Sea; the prior justification procedure remains the strongest version of the precautionary principle; see *infra* causality link.

«[I]n order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.»⁽⁶³⁾

Another major regional system to adopt the principle of precaution as the cornerstone of its environmental policy was the European Community, following the modification brought by the 1992 EU Treaty. Shortly before the beginning of the EU Treaty negotiations, the Heads of States and Governments of the Community adopted a political Declaration on the Environment⁽⁶⁴⁾, affirming that EC environmental policy shall be based on sustainable development and preventive and precautionary action. The Declaration was, in fact, a political endorsement, for environmental issues, of a practice already existing in other areas of community policy to enact directives and regulations concerning products and activities despite the lack of conclusive scientific evidence of the danger such product or activity involve for the environment⁽⁶⁵⁾. The principle of

(63) 1990 Bergen Ministerial Declaration on Sustainable Development, Princ. 7; see also 1990 Bergen Joint Agenda for Action, Para. 8.

(64) European Council, 5-26 June 1990, [1990] *EC Bull.* 18, 136.

(65) An often quoted example is Council Directive 88/146/EEC, prohibiting the use in livestock farming of certain substances having hormonal action, [1988] OJ L70, adopted despite the fact that scientific research on the impact of meat fattened with hormones on human health was still on-going and its outcome uncertain. The directive got challenged *inter alia* for being founded on inconclusive scientific evidence of the human health-related impact of hormones, hence inconsistent with the principle according to which legislation must be objective and rationally justified (principle of legal certainty). Its legality was upheld by the European Court of Justice, in the view of the discretionary power of the Council in the implementation of the common agricultural policy, on the ground that scientific evidence was one factor, yet by no means the sole factor in the enactment of European rules; EEC Case C-331/88, *The Queen v. The Minister of Agriculture, Fisheries and Food and the Secretary of State for Health, ex parte: Fedesa and Others*, [1990] *ECR* I-4023; decision of the Court, Para. 9. The Commission applied the same reasoning in its recent Decision 96/239/EC on the legality of the EU emergency measures to protect against BSE, banning the import of British beef; [1996] OJ L78/47; see Meng, 'The Hormone Conflict between the EEC and the United States within the Context of the Gatt', 11 *Michigan JIL* (1990), 819. This reasoning has also been followed with regard to environmental measures, and for instance with Council Regulation 345/92/EC, on the Conservation of Fishery Resources, that limits the maximum length of driftnets for tuna-fishing, and excludes any extension of such length «unless scientific opinion proved the absence of ecological risk»; [1992] OJ L42/15. In a legal challenge to that Regulation, the Court found that (a) conservation measures need not be in conformity with scientific opinion, and (b) the absence of scientific opinion, or non conclusive scientific opinion does not preclude the Council from adopting measures deemed indispensable for the achievement of common fisheries policy; *Establishments A. Mondiet v. Armement Islais* case [1993] *ECR* I-6133.

The precautionary principle constituted one ground invoked in a legal challenge against France in connection with the resuming of nuclear tests on Mururoa and Fangataufa Atolls in 1995; the *locus standi* for action was denied by the Court of First Instance, and the case dismissed without consideration on the merits; EC Case T-219/95R, *Danielsson and Others v. Commission*; [1995] *ECR* II-3052, Para. 44; on which see Deimann, 'French Nuclear Tests: Court of First Instance Dismisses Application for Interim Relief', 1 *Environmental Law Network International* (1996), 48. France dismissed similar allegation subsequently made in an application on the same issue under the European Convention on Human Rights, on the ground that the argument invoked by the applicants, viz. the threat to
(continued)

precaution was formally endorsed, alongside other principles already embodied in the SEA⁽⁶⁶⁾, as cornerstones of European environmental policy⁽⁶⁷⁾.

The precautionary approach/principle has been referred to and relied upon in various number of sectors of international environmental law and policy since the late 1980s, where justified by the irreversibility of the damage, and the importance of the reparation costs. It was for instance endorsed with regard to ozone layer protection⁽⁶⁸⁾, climate change⁽⁶⁹⁾, hazardous wastes management⁽⁷⁰⁾ and in relation to transboundary air

environment and health inherent in underground nuclear testing «ne s'appuyerait sur aucune base scientifique sérieuse»; *Taura et al. v. France*, Application 28204/95, 83 *D&R* (1995), 112; reproduced in 18 *Revue Universelle de Droits de l'Homme* (1996), 315, at 317.

(66) Namely the polluter pays and the prevention principles, and the principle according to which pollution must be tackled at the source.

(67) Art. 130R(2) as amended by 1992 Maastricht Treaty reads:

«Community policy on the environment (...) shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay».

See Jans, *European Environmental Law* (Kluwer Law International, 1995), 20 *et sequ.*; Freestone & Ryland, 'EC Environmental Law after Maastricht', 45 *NILQ* (1994), 152; Kiss & Shelton, *Traité de Droit Européen*, 40 *et sequ.*; Krämer, *E.C. Treaty and Environmental Law*, 2nd edn (Sweet & Maxwell, 1995), 53 *et sequ.* Also Backes & Verschuuren, 'The Precautionary Principle in International, European, and Dutch Wildlife Law', 9 *Colorado JIELP* (1998), 43, at 47 *et sequ.* and 59 *et sequ.*

(68) The hypothesis of a threat of CFC-induced ozone layer depletion was first laid by American scientists late 1974. While the US promptly enacted measures to curb CFCs production and consumption (1977 Amdt to Clean Air Act, 42 US §7457(b)), the European Community enacted the first set of legally binding measures in only 1980 (Directive 80/372/EEC concerning CFCs in the environment, [1980] OJ L90/45). Whereas the US made quick progress in the reduction of the use and production on CFCs, with some notable regression / set-backs during the Reagan era, the European Community took more time to adopt a firm stance, embroiled in economic conflicts between majors CFCs producers (France, UK and Italy) and proponents for a strict CFC policy (FRG, Netherlands, Belgium), and weakened by the decentralised policy-making system; Benedick, *Ozone Diplomacy* (Harvard University Press, 1991), Chap. 2, 3; Hisschemsler, *International Positions Concerning the Greenhouse Effect* (Institute for Environmental Studies, Vrije Universiteit, Amsterdam, 1993). An ad-hoc Meeting of Senior Government Officials Experts in International Environmental Law, convened in the early 1981 at the initiative of UNEP at Montevideo, identified the protection of the stratosphere ozone layer among the specific subject areas in which the development of environmental guidelines were urgently needed; see Montevideo Programme for the Development and Periodic Review of Environmental Law, adopted by UNEP Governing Council's decision 10/21, 31 May 1982; a similar message was conveyed by UNEP's *State of the Environment 1972-1982* (UNEP, 1982), at Paras. 27 *et sequ.* The 1985 Vienna Convention on the Ozone Layer (preamble Para. 5) and the original 1987 Montreal Protocol on the Ozone Layer (preamble, Para. 8) simply acknowledge that precautionary measures have already been taken at the national and international levels for the protection of the ozone layer. The determination of States to take precautionary measures to control the global emission of substances that deplete the ozone shield was formally incorporated in the Protocol *via* the 1990 Amendment (preamble Para. 6 and Art. 1 (A)(1)). It is usually considered however, that the very fact of that the Convention and Protocol had been drafted while scientific research had not covered all the effects of CFCs on the ozone layer reveals a precautionary approach; see Litfin, 'Framing Science: Precautionary Discourse and the Ozone Treaties', 24 *Millennium* (1995), 251; Primrosch, 'Das Vorsorgeprinzip im internationalen Umweltrecht', 51 *ZöR* (1996), 227, at 230.

(69) Since the CFC-Ozone hypothesis had first been expressed (*supra* n. 68), there had been a growing consensus among scientists and policy-makers alike, on the urgent need to co-operate and address the
(continued)

pollution⁽⁷¹⁾. It was also reflected in documents regulating to marine and freshwater water pollution⁽⁷²⁾, as well as in the area of natural resources management⁽⁷³⁾. It was

problem of climate change and global warming; the consensus was even strengthened when British scientists discovered the existence of an ozone hole over the Antarctic (1985). Nevertheless, precaution remained a much debated issue throughout the international negotiations on the Framework Convention on Climate Change (Feb. 1991-May 1992), with any formal reference to a precautionary approach being carefully avoided; see for instance 1988 Resolution Res./43/53, on the Protection of Global Climate for Present and Future Generations of Mankind, *encouraging* States to treat climate change as a *priority issue* and take *timely measures*. See also 1989 Declaration of the Hague, urging for a new approach through the development of «new principles of international law including more effective decision-making and enforcement mechanisms», Para. 6; 1990 Noordwijk Declaration on Atmospheric Pollution and Climate Change, Para. 2; 1989 Paris Economic Declaration of the G7, Paras. 39-40; 1989 Langwaki Declaration of the Commonwealth Heads of Governments, Para. 3; 1990 Houston Economic Declaration of the G7, Para. 62. The shift towards a precautionary approach was officially endorsed at the Second World Climate Conference (1990), with a Ministerial Declaration «[r]ecognizing that climate change is a global problem of unique character and taking into account the remaining uncertainties in the field of sciences (...) a global response (...) must be decided and implemented without further delay (...)»; the principle has since been constantly reaffirmed; see also 1990 Bergen Ministerial Declaration on Sustainable Development (Para. 14). The principle of precaution was finally incorporated in 1992 Climate Change Convention, where there is a threat of serious and irreversible damage, Art. 3(3), how not without a reference to the particular responsibility of developed States, preambular Paras. 3 and 18, Arts. 3(1), and the cost effectiveness of the measures to be taken, Art. 3(3). See further on the Convention van Beukering & Vellinga, *Climate Change: From Science to Global Politics* (Institute for Environmental Studies, Vrije Universiteit, 1993); Bodansky, 'The United Nations Framework Convention on Climate Change: A Commentary', 18 *Yale JIL* (1993), 451; Bodansky, 'Prologue to the Climate Change Convention', in Mintzer & Leonard (eds.), *Negotiating Climate Change, The Inside Story of the Rio Convention*, Cambridge University Press, 1994, Chap. 2; Lang, 'Auf der Suche nach einem wirksamen Klima-Regime', 31 *AVR* (1993), 13; Pulvenis, 'The Framework Convention on Climate Change', in Campiglio et al (eds.), *The Environment After Rio: International Law and Economics* (Graham & Trotman/Martinus Nijhoff, 1994), Chap. 7.

(70) The debate on hazardous waste disposal has long been reduced to a matter of balancing industrial development and economic considerations, with environmental considerations; see for instance 1987 UNEP Cairo Guidelines on Hazardous Wastes; 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Arts. 4(1), and (2)(a). In 1990, UNEP Governing Council passed a Decision SS.II/4 B, on a Comprehensive Approach to Hazardous Waste, urging Governments and international fora to implement the precautionary approach through clean production methods, to reduce and minimise the production of hazardous waste; reproduced in 20 *EPL* (1990), 157. The first legally binding provision on a precautionary approach to waste and clean production approach is contained in the 1991 Bamako Convention on Transboundary Movement of Hazardous Wastes, Art. 4(3)(f). The precautionary approach in that treaty is not linked with any serious irreversible damage, or any particular threshold of scientific evidence. A ban of all export of hazardous waste to African, Caribbean and Pacific States (ACP) had already been imposed through 1989 ACP-EEC Lomé IV, Art. 39(1), and is reiterated in 1992 Agenda 21, Para. 20.32. The latter document also urges for precautionary measures for the control of industrial wastes discharge generally, Para. 18.40. The Conference of the Parties to the 1989 Basel Convention, *supra*, have followed the move and have agreed, in 1994, to substitute regulation of transboundary movements of hazardous wastes for a complete ban from the 31 December 1997; as noted in 24 *EPL* (1994), 147. In 1961 already, WHO passed a resolution requesting «...urgently all the Members (...) to prohibit all discharge of radioactive wastes into watercourses or the sea, to the extent that the safety of such discharged has not been proved...»; WHO Res. WHA/14.56, 14 World Health Assembly (1961), No. 110, Pt. I, at 24; quoted after Kirgis, 'Technological Challenge to the Shared Environment: United States Practice', 66 *AJIL* (1972), 290, at 297. Such resolution might have introduced a procedure similar to the prior justification procedures, introduced by OSCOM Decision 89/1, on the Reduction and Cessation of Dumping Industrial Wastes at Sea (1989); see *infra* n. 149. US opposed the WHO Resolution *inter alia* on the ground that «the resolution prejudged the question of whether pollution had occurred»; Kirgis, *ibid.*

(71) See 1994 Protocol to the 1979 ECE Transboundary Air Pollution Convention, on Further
(continued)

only suggested as a *general* principle of international environmental and developmental law and policy in the 1992 Rio Declaration on Environment and Development, which states:

Reduction of Sulphur Emissions, preambular Para. 3; also UN/ECE 1994 Oslo Ministerial Declaration on Long-Range Transboundary Air Pollution, Para. 7, reproduced in 24 *EPL* (1994), 331. The negotiation of this protocol however was seriously affected by the refusal of some countries, *inter alia* the US and UK, to commit themselves to concrete reduction targets in the light of the remaining scientific uncertainty in linking emission to damage; Fraenkel, 'The Convention on Long-Range Transboundary Air Pollution : Meeting the Challenge of International Cooperation', 30 *Harvard ILJ* (1989), 447.

(72) Already mentioned: 1992 Convention on the Protection of the Environment in the North East Atlantic; PARCOM Recommend. 89/1 on the Principle of Precautionary Action (1989) and PARCOM Recommend. 89/2, on the Use of Best Available Technology; OSCOM Decision 89/1 on the Reduction and Cessation of Dumping Industrial Wastes at Sea. Inspired by the work of OSCOM and PARCOM, the High Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution approved a Recommendation for the Implementation of the Precautionary Principle in the Mediterranean Sea Area, in 1989 (the recommendation is posted on Greenpeace Website @ <<http://www.greenpeace.org>>. Following UNEP Governing Council's Recommendation 15/27 advocating a Precautionary Approach to Marine Pollution with Waste-Dumping at Sea [reproduced in 19 *EPL* (1989), 130], the Conference of the Contracting Parties to the 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter adopted, in 1996, a Protocol to that Convention which endorses the precautionary approach; see *infra* n. 149; and Birnie's commentary 'Are Twentieth-Century Marine Conservation Conventions Adaptable to Twenty-First Century Goals and Principles?', 12 *IJ Marine & Coastal L* (1997), 488 (Part II), at 514 *et sequ*. See also 1976/95 Barcelona Convention on Mediterranean Sea, Art. 3(a); 1994 Danube River Convention, Art. 2(4) and 3(2)(e); 1992 ECE Watercourses Convention, Art. 2(a); 1991 OECD Recommend. C(90)164, on Integrated Pollution Prevention and Control; OECD Recommend. C(89)12, on Water Resource Management Policies, Princ. VII; 1990 Oil Pollution Preparedness Convention, preambular Para. 3; 1992 Baltic Sea Convention, Art. 3(2). Likewise, 1992 Agenda 21 calls for a precautionary approach to marine and coastal areas management and development, Paras. 17.21 and 17.22, and fresh water quality management, Para. 18.40. The precautionary principle is neither explicitly referred nor implied in the 1997 UN Convention on the Non-Navigational Uses of International Watercourses.

(73) The 1992 Biodiversity Convention provides for precaution «where there is a threat of significant reduction or loss of biological diversity, preambular Para. 9; 1988 CRAMRA, by contrast with the optimum-sustainable-yield-based 1980 CCAMLR, Art. II(3), bans any such activity, although providing for exception, Art. 4. Additionally, even though they do not expressly rely on the principle of precaution, the 1989 Wellington Convention on Long Driftnets and EEC Regulation 345/92, on the Conservation of Fishery Resources prohibits driftnets longer than 2,5 km, despite the lack of conclusive evidence of the environmental harm caused by such nets, and, in this respect constitutes a perfect example of precautionary action; see *Mondiet* case, *supra* n. 65. And so were too the series of UNGA resolutions on Large-scale Pelagic Driftnets in High Seas Fishing and its Impact on the Living Marine Resources of the World's Oceans and Seas, recommending a moratorium on the use of large-scale pelagic driftnets in high seas fishing; UNGA, A/Res./44/225, 22 December 1989; UNGA, A/Res./45/197, 21 December 1990; UNGA, A/Res./46/215, 20 December 1991. These Resolutions have been particularly criticised for not being supported by the best scientific evidence available; see for instance Burke *et al.*, 'United Nations Resolutions on Driftnet Fishing: an Unsustainable Precedent for High Seas and Coastal Fisheries Management', 25 *ODIL* (1994), 127. On the precautionary principle in fisheries management: Hewison, 'The Precautionary Approach to Fisheries Management: An Environmental Perspective', 11 *IJ Marine & Coastal L* (1996), 301; Garcia, 'The Precautionary Principle: its Implications in Capture Fisheries Management', 22 *OCM* (1994), 99; Cooke & Earle, 'Towards a Precautionary Approach to Fisheries Management?', 2 *RECIEL* (1993), 252. On precautionary management of biodiversity, see Christie, 'The Eternal Triangle: The Biodiversity Convention, Endangered Species Legislation and the Precautionary Principle', 10 *EPLJ* (1993), 470; more specially on wildlife law, see Backes & Verschuuren, *supra* n. 67. Mention of the precautionary approach in the management of natural resources was also contained in IUCN/UNEP/WWF, *Caring for the Earth*, (IUCN/UNEP/WWF, 1991), at 29 and 174 (Point 41).

«In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.»⁽⁷⁴⁾

The precautionary principle is referred to in most regional and international, global and sectoral environmental documents negotiated and adopted during and after the Earth Summit⁽⁷⁵⁾.

It is more particularly elaborated upon in the context of the 1995 Straddling Fish Stocks Agreement, which adapts the regime adopted in 1982 UNCLOS to the 1992 Agenda 21, Chapter 17, and promotes a precautionary-based management of fisheries⁽⁷⁶⁾. The drafting of the Agreement was largely influenced by FAO's Report on the Issue of Responsible Fisheries⁽⁷⁷⁾. It sets forth a precautionary reference point

⁽⁷⁴⁾ 1992 Rio Declaration on Environment and Development, Princ. 15.

⁽⁷⁵⁾ Several references are made to a precautionary approach in 1992 Agenda 21; see *inter alia* Paras. 17.1, 17.21, 17.22, 18.40, 19.14, 19.49, 20.32; see also references contained in 1992 Biodiversity and Climate Change Conventions (*supra*), and 1994 Energy Charter Treaty, Art. 19(1). On the difference between principle and approach, see *infra* n. 104.

⁽⁷⁶⁾ See generally Hewison, 'The Precautionary Approach to Fisheries Management: an Environmental Perspective', 11 *IJ Marine & Coastal L* (1996), 301; Tahindro, 'Conservation and Management of Transboundary Fish Stocks: Comments in Light of the Adoption of the 1995 Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks', 28 *ODIL* (1997), 1; Davies & Redgwell, 'The International Legal Regulation of Straddling Fish Stocks', 67 *British YbIL* (1997), 199; Lucchini, 'Stocks Chevauchants - Grands Migrateurs', in Al-Nauimi & Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, 1995), 513; Warbrick & McGoldrick, 'The Straddling Stocks Agreement of 1995 - An Initial Assessment', 45 *ICLQ* (1996), 463. More generally of the shortcomings the original 1982 UNCLOS regime, see Meltzer, 'Global Overview of Straddling and Highly Migratory Fish Stocks: The Nonsustainable Nature of High Seas Fisheries', 25 *ODIL* (1994) 255.

Another recent example of management rules grounded on the principle of precaution is the 1994 IWC New (Revised) Management Procedure for Baleen Whales, drafted by the International Whaling Commission Scientific Committee. The New (Revised) Management Procedure sets forth a 'catch limit algorithm', specifying the factors to be taken into account when calculating the catch limits, to duly account for uncertainty in a number of factors, such as the population size, and the real degree of depletion of the Baleen Whales stock. The New (Revised) Management Procedure, accepted by the International Whaling Commission in 1994, is reproduced in 44 *Report of the International Whaling Commission* (1994), 145 *et sequ.*; on which see detailed commentary by Donovan, 'The International Whaling Commission and the Revised Management Procedure', in European Bureau for Conservation and Development, *Proceedings of the Conference on Responsible Wildlife Resource Management* Brussels 29-3 1993. Donovan's paper is posted on Web @ <<http://www.highnorth.no/th-in-wh.htm>>. Some authors suggest more generally that the International Whaling Commission's Policy have been largely inspired by precaution since the 1982 temporary Moratorium on Commercial Whaling; see Birnie & Boyle, 455; Freestone, 'The Precautionary Principle', at 30. The precautionary approach has also been recently endorsed in the context of CITES, more particularly with regard to the listing procedures, so that «when [available] information [is] inadequate, no trade would be allowed that could endanger a species»; see new Listing Criteria for the Amendment of Appendices I and II (Everglades Criteria), unanimously approved at the Ninth Conference of the Parties to the 1973 CITES, in replacement of the 1976 Bern Criteria; see brief report of the measures taken at Conference in 25 *EPL*(1995), 88.

⁽⁷⁷⁾ See also the 1995 FAO Code of Conduct for Responsible Fisheries; on which see Bonucci, 'Towards an International Code of Conduct for Responsible Fishing', 2 *RECIEL* (1993), 245.

or estimated value «which corresponds to the state of the resource and of the fishery...». It also imposes «boundaries (...) intended to constrain harvesting within safe biological limits within which the stocks can produce maximum sustainable yield» (limit reference points), and «management objectives» (target reference points). Those reference points, however, are to be established through an agreed scientific procedure and are, therefore, expected to anticipate scientific uncertainty only to a certain extent⁽⁷⁸⁾. The endorsement of the precautionary principle as international fisheries resources management principle met the resistance from the part of some States and entities, most notoriously Japan, Korea and the EC, which held it as relevant only to pollution agendas. The precautionary principle is also considered in relation to the greening of international trade⁽⁷⁹⁾.

iii. Status of Precautionary Principle under International law

Notwithstanding the endorsement of the principle of precaution by several industrial States at the domestic level since the mid 1980s⁽⁸⁰⁾ and its application at the regional

(78) See Agreement, Annex II: Guidelines for the Application of Precautionary Reference Points in Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

(79) See for instance: 1992 OECD Secretariat Draft Guidelines for the Minimising of the Negative Environmental Effects of Trade Policies; OECD Environment Policy Communiqué, 1996, Para. 27. It has been suggested, albeit with great caution, that the precautionary principle, once properly defined, might provide some guidance in the international trading system; Esty, *Greening the GATT* (Institute for International Economics, 1994), 81; OECD, *Environmental Principles and Concepts*, 1995, OECD/GD(95)124, at 15 *et sequ.* (Precautionary Principle and Related Concepts); Roht-Arriaza, 'Precautionary Participation and the "Greening" of International Trade Law', 7 *J. Envtl L. & Litigation* (1992), 57. Nevertheless, the Gatt/WTO system has been closer to a preventive than a precautionary approach. Indeed, the environmental exception to free trade has been applied in a very restrictive way, and in all cases «the onus to prove a case [of necessity to enact domestic measures to conserve specific natural resources] lies with the party wishing to conserve the resource, not the party allegedly depleting it»; Humphreys, 'Hegemonic Ideology an the International Tropical Timber Organisation', in Volger & Imber (eds.), *The Environment & International Relations* (Routledge, 1996), Chap. 12, at 221. Hence for instance, in the 'Tuna-Dolphin War' between Mexico and the US over the enactment of restrictive trade measures to protect dolphins from incidental catch in the tuna fishing industry, the onus rests upon the US to demonstrate the necessity to protect the marine mammal; see the First Gatt Panel Report in the matter of *US-Restrictions on Imports of Tuna* (1991), 30 *ILM* (1991), 1594 (Tuna/Dolphin I); Second Gatt Panel Report in the matter of *US-Restrictions on Imports of Tuna* (1994), 33 *ILM* (1994), 839 (Tuna/Dolphin II); see *supra* Chap. 2/iii. Sovereignty over Environmental Resources and Environmental Policies versus Globalisation of Environmental Standards and Policies.

The 1994 Gatt Agreement has preserved unchanged the environmental exception (Art. XX); it still refers to the *necessary* test (Art. XX(h)) and *relating to* test, interpreted by the Gatt Panel as primarily aimed at test (Art. XX(g)). The only additionality consists in the chapeau of Art. XX, which states explicitly what was already implicitly agreed under the 1947 Gatt agreement, namely that the measures taken under the general exceptions shall not be applied «in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade...»; see *supra* Chap. 2/iii. Sovereignty over Environmental Resources and Environmental Policies versus Globalisation of Environmental Standards and Policies.

(80) Although a certain caution is needed with over generalisation, as similarities in denomination do not necessarily denote real substantial similarities in the way each State applies the principle at the domestic
(continued)

and international level for specific environmental issues, its consecration as a *general* principle of international environmental law, and *a fortiori* as a principle of general or customary international law⁽⁸¹⁾, has remained a very controversial matter. With no such

level. And indeed, after a thorough comparative study on the principle in a selected number of countries, Rehbinder reaches the conclusion that the States having endorsed the principle in their national environmental policy can be classified at least in two broad categories: the 'precautionary States' (*Vorsorgestaaten*), applying to a certain degree, the precautionary principle as understood in German law, and the 'protection States' (*Schutzstaaten*), closer to the *Schutzprinzip*; see German differentiation between *Schutz* and *Vorsorge*, *supra* 2. Origins of the Concept; Rehbinder, *Das Vorsorgeprinzip im internationalen Vergleich*, at 237 *et sequ.* Accordingly, a formal reference to precautionary principle in domestic laws does not always mean that the State actually implements a precautionary approach as broadly understood in this thesis, nor that their respective policy has any similarities with that adopted in other countries.

On the principle of precaution in the domestic environmental policy in Australia: Dovers, Norton & Handmer, 'Uncertainty, Ecology, Sustainability and Policy', 5 *Biodiversity Conservation* (1996), 1143, at 1149 *et sequ.*; Giraud, 'Le droit et le principe de précaution: Leçons d'Australie', *Revue Juridique de l'Environnement* (1997-1), 21; Harding & Fisher, 'The Precautionary Principle in Australia', in O'Riordan & Cameron, Chap. 14; Young, *For Our Children's Children: Some Practical Implications of Inter-generational Equity and the Precautionary Principle* Resource Assessment Commission Occasional Publication No. 6 (Australian Government Publishing Service, 1993). A particularly strong interpretation of the principle has been given by the Australian Superior Court in the *Leatch* case, in which the Court overturned the permission for a road development that was *expected* (but not proved) to disrupt the habitat of threatened species; *Leatch v. Director-General, National Parks and Wildlife Service and Shoalhaven City Council*, [1993] 81 *Local Government and Environment Reports of Australia*, 270. Less weight was given to the principle in a subsequent decision rendered on similar cases: *Nicholls v. Director National Parks and Wildlife Service, Forestry Commission of New South Wales, Minister for Planning*, [1994] 84 *Local Government and Environment Reports of Australia*, 397; in Canada, a 1988 case indicates a precautionary approach at least with regard to marine pollution; see *Regina v. Crown Zellerbach Canada Ltd*, [1988] 49 *Dominion Law Reports*, Fourth Series, 161; see also VanderZwaag, *Canada and Marine Environmental Protection*, (Kluwer Law International, 1995), at 12 *et sequ.*; in France: Rehbinder, *ibid.*, at 121; in Germany: *supra* 'Vorsorgeprinzip' and Precautionary Principle; in Japan: Rehbinder, *ibid.*, at 73; in The Netherlands: Rehbinder, *ibid.*, at 147; Backes & Verschuuren, *supra* n. 67, at 64 *et sequ.*; in Sweden: Rehbinder, *ibid.*, at 183; in Switzerland: Koechlin, *Das Vorsorgeprinzip im Umweltschutzgesetz unter besonderer Berücksichtigung der Emissions- und Immissionsgrenzwerte*, (Helbing & Lichtenhahn, 1989), §3; Zürcher, *Die vorsorgliche Emissionsbegrenzung nach dem Umweltschutzgesetz* (Schultess, 1996); Rehbinder, *ibid.*, at 205; in the UK: Haigh, 'The Introduction of the Precautionary Principle into the UK', in O'Riordan & Cameron, Chap. 13; Holder, 'Safe Science? The Precautionary Principle in United Kingdom Environmental Law', in Holder (ed.), *The Impact of EC Environmental Law in the United Kingdom* (Wiley, forthcoming), with extensive review of recent domestic case-law; Jordan & O'Riordan, 'The Precautionary Principle in UK Environmental Law and Policy', in Gray (ed.), *UK Environmental Law in the 1990s* (Macmillan, 1995), Chap. 5; Rehbinder, *Das Vorsorgeprinzip im internationalen Vergleich*, 91; some authors suggest however that, although the British Government has formally endorsed the principle, domestic policies in Britain, are closer to prevention than precaution; Cameron & Abouchar, 'The Precautionary Principle'; in the US: Bodansky, 'The Precautionary Principle in US Environmental Law', in O'Riordan & Cameron, Chap. 12; Rehbinder, *ibid.*, at 21.

(81) In the dispute that opposed the EC to the US and Canada over the EC's ban on import of hormone treated meat and meat products under the 1994 GATT regime, the EC relied to a large extent upon the precautionary principle, which, in the view of the European communities, constituted «a general customary rule of international law or at least a general principle of law, the essence of which applies not only in the management of a risk, but also in the assessment thereof». Both the Gatt Panel and Appellate Body cautiously dismissed this argument; they noted that the status of the precautionary principle was already the object of a serious controversy in the restricted context of international environmental law, and that it appeared 'less than clear' as to whether the principle had already been widely accepted by Members as a 'principle of *general* or *customary international law*'; WTO Appellate Body Report in the matter of (continued)

consecration contained in any international *legally binding* document, the debate revolves primarily around the customary character of the principle of precaution explicitly⁽⁸²⁾ and implicitly⁽⁸³⁾ recognised by some authorities, and by certain States⁽⁸⁴⁾.

State practice constitutes the major argument invoked in support of the crystallisation of the precautionary principle in international customary law. As seen, the principle is widely reflected, directly or indirectly, at both the national and international levels. Firstly, regulatory action has been taken with respect to certain environmental issues, notwithstanding the lack of conclusive evidence, by virtue of necessity solely. Then, some binding and non-binding documents addressing specific environmental issues expressly refer to the principle, some even in mandatory terms⁽⁸⁵⁾. Finally, a number of leading international environmental fora have explicitly advocated the principle in relation to certain environmental problems⁽⁸⁶⁾.

EC Measures Concerning Meat and Meat Products (Hormones), WT/DS26/AB/R, WT/DS48/AB/R 16 January 1998, at Para. 123 (emphasis as in original); available on the WTO Web Site @ <<http://www.wto-org>>.

(82) See for instance Hohmann, *Precautionary Legal Duties*, at 12 *et sequ.* and 341 *et sequ.*; McIntyre & Mosedale, 'The Precautionary Principle as a Norm of Customary International Law', 9 *Journal of Environmental Law* (1997), 221.

(83) ICJ Judge Weeramantry has taken a particularly 'enlightened' stance on environment-related issues; in the recent nuclear tests and weapons cases, he suggested that the precautionary principle, alongside the principle of intergenerational equity and the common heritage of mankind, were part of environmental law; he seemed to admit however that on the contrary to the latter, the precautionary principle was gaining 'increasing support as part of international law of the environment', has yet to be recognised as such by the Court; *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*, ICJ Rep. 1995, 287, (diss.op.), at 342-344; *Legality of the Use by a State of Nuclear Weapons in Armed Conflict, Advisory Opinion*, ICJ Rep. 1996, 66, 35 *ILM* (1996), 879, (diss.op.), 35 *ILM* (1996), at 904. A similar stance is taken by Judge Palmer in ICJ Order on Nuclear Test case (diss.op.), *ibid.*, at 412, Para. 89.

(84) The duty to take precautionary measures was also invoked by Hungary in its original Application to the International Court of Justice on the Diversion of the Danube River, as an obligation in general law. the terms of precaution or precautionary principle/approach were not used however in the Special Agreement between Hungary and the Slovak Federation for Submission to the International Court of Justice of the Differences between them Concerning the *Gabcikovo-Nagymaros* Project, which officially superseded Hungary's original unilateral application; Hungarian Application to the International Court of Justice on the Diversion of the Danube River, Sands, *Principles* (Vol. IIA), No 28, and Special Agreement between Hungary and the Slovak Federation for Submission to the International Court of Justice of the Differences between them Concerning the *Gabcikovo-Nagymaros* Project, 32 *ILM* (1993), 1293. Likewise, New Zealand, in its application to the ICJ concerning the French Nuclear Tests in Mururoa Atoll, referred to the precautionary principle as a 'very widely accepted' principle in contemporary international law; France, whilst insisting on the uncertain status of the principle of precaution in international law, argued that it had fully complied with its presumed content; *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*, ICJ Rep. 1995, 288, at Para. 5; also Sands, 'L'affaire des essais nucléaires II (Nouvelle-Zélande c. France): Contribution de l'instance au droit international de l'environnement', 102 *RGDIP* (1997), 447, at 471 *et sequ.* See also *Danielsson and Others v. Commission*, 1995, *supra* n. 65.

(85) *Supra* n. 71 to 75.

(86) See for instance the declarations and decisions taken by inter-governmental bodies (UNEP Governing
(continued)

The question, however, is whether state practice, «including that of the States whose interests are specially affected [have been] both extensive and virtually uniform in the sense of the provision invoked - and [have] moreover occurred in such a way as to show a recognition that a rule of law or legal obligation is involved»⁽⁸⁷⁾. In this respect, the attitude of less industrialised countries and that of the United States and towards the international recognition of such principle raises serious questions, even though the ICJ has specified that the binding character of a rule is not subordinated to universal acceptance⁽⁸⁸⁾.

Developing countries are not familiar with the principle⁽⁸⁹⁾, and tend to perceive it as yet another disguised expression of environmental neo-protectionism⁽⁹⁰⁾. They largely consider the principle of precaution as a European-made device for European problems otherwise fully inappropriate to satisfy their own needs and serve their self-interests⁽⁹¹⁾, which implementation is well beyond their own financial and technological

Council, OECD, EC/EU; Paris and Oslo Commissions; *supra*), inter-governmental and ministerial Conferences (Earth Summit, North Sea Ministerial Conferences; Conference on the Atmospheric Pollution and Climate Change; Bergen Ministerial Conference; see *infra*). See also 1989 Paris Economic Declaration of the G7, Para. 34; 1989 Final Document of the Nordic Council's International Conference on Pollution of the Seas (relevant excerpts in Greenpeace International, 1989 *Recommendations for the Implementation of the Precautionary Principle in the Mediterranean Sea Area*, posted on Greenpeace Website @ <<http://www.greenpeace.org>>; Recommendations, issued by the International Conference on Environmental Law, The Hague, 1991, Para. 3(d); 1992 Decision VIII on the Environment, taken at CSCE Helsinki Summit, 10 July 1992, Para. 3. In its 1990 annual report on the law of the sea, the Secretary General had reached the conclusion that the principle had been endorsed by 'virtually all recent international forums»; UN DOC. A/45/721.

(87) *North Sea Continental Shelf, Judgment, ICJ Rep. 1969, 3, Para. 74*; see also *Colombian-Peruvian Asylum case, Judgment of November 20th, 1950: ICJ Rep. 1950, 266*.

(88) See for instance *Fisheries case, Judgment of December 18th, 1951: ICJ Rep. 1951, 116, at 128*.

(89) Most environmental co-operation treaties among developing States are geared towards the development of a common resource, and worded in terms of rational exploitation or harmonious use; they remain (realistically) modest as far as the means involved are concerned, and only provide for actions and measures commensurate with their financial and technological capacities, which does not usually involve environmental action regardless of scientific certainty; on the contrary, emphasis is put on the intensification of scientific research and exchange of information; see for instance the 1978 Amazon Treaty and subsequent 1989 Amazon Declaration, whereby riparian States of the Amazon basin commit themselves to promote an harmonious development of the Amazon region. Similar language is used in the 1989 Brazilia Declaration on the Environment, Princ. 2 *in fine*.

(90) On the reticence of developing States to international environmental action most notably in the context of 1972 Stockholm Conference on the Human Environment, see Sohn, 'The Stockholm Declaration on the Human Environment', 14 *Harvard ILJ* (1973), 433, at 469, and *supra* Chap. 1/3. Evolutionary Perspective of Sustainable Development.

(91) Chisholm & Clarke, 'Natural Resource Management and the Precautionary Principle', in Dommen (ed.), *Fair Principles for Sustainable Development* (Edward Elgar, for UNCTAD, 1993), Chap. 7 (116 *et sequ.*)

means. They also tend to hold industrialised States responsible for the current state of the global environment⁽⁹²⁾.

The US position is perhaps more ambiguous. Albeit front-runner in the development of a domestic environmental policy based on precaution⁽⁹³⁾, the US has displayed an extreme reluctance to the internationalisation of the principle⁽⁹⁴⁾, considering it as a

(92) Such position is particularly clearly reflected in the respective declarations issued by the various regional preparatory meetings organised in the process leading to the Earth Summit; see for instance 1991 Tlatelolco Platform on Environment and Development, 1990 Bangkok Ministerial Declaration on Sustainable Development, and 1991 Beijing Ministerial Declaration on Environment and Development, which all acknowledge that the protection of the environment is in the common interest of the international community, but nonetheless emphasise that the main input to the effort of sustainable development must come from industrialised nations on the basis of their greater responsibility for the global process of environmental degradation (common but differentiated responsibility) or on the basis of their greater financial and technological resources (respectively Paras. 6-6-8; see also 1989 Brazilia Declaration on the Environment, *supra*, Princ. 12 *in fine*). And even though provision is made for the precautionary principle (Paras. 23-19-none), no further indication is given of the significance and implications thereof; the overall context of the various declarations suggests the principle referred to is closer to conservation, as understood for instance in the 1972 Stockholm Conference on the Human Environment, than real precaution as understood in the 1990 Bergen Ministerial Declaration on Sustainable Development.

African States displayed less suspicion towards the principle of precaution, essentially due to the fact that for most of them, the principle had already been pushed through by the European Community through the Lomé process; see the 1989 Kampala Declaration on Sustainable Development in Africa (no express reference is made to the precautionary principle). As to the Arabic States, they are already less embroiled in the environment-versus-development conflict, and appear disposed to endorse the principle. The 1986 Tunis Declaration on Environment and Development expresses serious concern for the preservation of the potential of natural resources for future generation (Para. 3), and pragmatically underlines that «[t]he protection of the environment against pollution and deterioration is less expensive, easier to implement and more beneficial than restoring it later»; no express reference is made to the then emerging principle of precaution.

(93) The US had incorporated a precaution in the 1970s already, through the 1970 Clean Air Act (42 United State Code (USC) §7412, CAA §112), requesting from the Environment Protection Agency (EPA) an ample margin of safety standards in setting emission-limits for hazardous pollutants; environmental impact assessment was already made compulsory prior to the activities of all federal agencies that might have a significant impact on the environment by the 1970 National Environmental Policy Act (42 USC §4322, NEPA §102); the 1972 Amendment to the Federal Water Pollution Control Act set a zero-discharge goal for water pollution (33 USC §1251, WPCA (Amdt) §101) The US were also the first to set aside the classic wait-and-see policy, and take regulatory action to abate greenhouse gas emission regardless of the scientific uncertainty still underlying the global warming debate; see 1977 Clean Air Act Amendments, which made it a duty for EPA to anticipate *reasonably* and assess risks rather than wait for proof of actual harm (42 USC §7457, CAA (Amdts) §157). Boyden Gray and Rivkin qualify such approach as 'no-regrets policy', or 'multiple objective steps': «actions taken in this areas should be based upon long-term outlook, "taking into account the full range of social, economic, and environmental consequences of the proposed actions for this and future generations"»; 'A No Regrets' Environmental Policy', 83 *Foreign Policy* (1991), 47, at 52.

(94) The 1986 US Third Restatement of the Law, § 601 is worded in terms of conservation and prevention, and does not imply a genuine anticipatory approach; the Restatement is worded in terms of injuries to the environment rather than risk, and no reference is made to technological progress. Likewise, the 1989 Draft American Declaration on the Environment, wary of mitigating the adverse effects of human activities, more than preventing the occurrence of the risk itself; the Draft Declaration however, provides for the prior assessment of any planned activities that might significantly affect the environment (Para. 6). See also position of the US in the EC-US/Canada hormones case under the 1994 Gatt, *infra* n. 104.

threat to liberalism and to scientific and technological advancement⁽⁹⁵⁾. The US has also constantly opposed the idea often associated with the principle of precaution that, with respect to some issues, industrialised States assume a greater share of responsibility than developing States⁽⁹⁶⁾. For these and other reasons⁽⁹⁷⁾, the US resisted the principle both at the Regional Preparatory Meeting for Europe and Others, in Bergen, at the Second World Climate Conference, and subsequently opposed Mexico's suggestion to incorporate the principle as an operational principle for the decision-making under the 1983 Cartagena Convention on the Marine Environment in the Wider Caribbean Region⁽⁹⁸⁾.

It could probably be argued that the precautionary principle constitutes a local custom among States of the European Union, hence applicable in their mutual relations⁽⁹⁹⁾; but even among those States which have assumed a leading role in the development of the principle, there has been some serious divergence on the

(95) See for instance the statement delivered by the US with regards to 1992 Agenda 21 and the 1992 Forestry Principles, in *UNCED Report Vol. II*, at 18, and US declaration at UNEP Conference for the adoption of the agreed text of the 1992 Biodiversity Convention, 31 *ILM* (1992), at 848; see further *infra* Partnership Principle: Technological and Financial Co-operation. See also O'Riordan, *Interpreting the Precautionary Principle*; Bodansky, 'The Precautionary Principle in US Environmental Law', in O'Riordan & Cameron, Chap. 12.

(96) At the 1972 Stockholm Conference on the Human Environment, the US had made it clear that new obligations upon developed States can only result from voluntarily accepted commitment; see US position on 1972 Stockholm Declaration on the Human Environment, Princ. 12, in Sohn, 'The Stockholm Declaration on the Human Environment', at 472. A similar stance was taken with regard to 1992 Rio Declaration on Environment and Development Princ. 7 (partnership & co-operation); see US declaration of understanding, in *UNCED Report Vol. II*, at 17-18. See further *infra* Partnership Principle: Technological and Financial Co-operation.

(97) The major factors lying behind US opposition to international endorsement of the principle in the context of climate change relate both to economic considerations and to the lack of scientific consensus on global warming; Macdonald, 'Appreciating the Precautionary Principle as an Ethical Evolution in Ocean Management', 26 *ODIL* (1995), 255, at 268.

(98) Report of the Fifth Intergovernmental Meeting on the Action Plan for the Caribbean Environment Programme and Second Meeting of the Contracting Parties to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Kingston, Jamaica, 1990; UNEP(OCA)/CAR IG 6, as reported in Freestone, 'The Precautionary Principle', at 27, n.27. The US delegation also questioned an express reference to the principle of precaution at the negotiations on a unified convention on the protection of the North East Atlantic, this time on the grounds of redundancy in a convention which is, in essence, based on precaution; Cameron & Wade-Gery, *Addressing Uncertainty*, 23. It appears however that the Clinton Administration, under the influence of Vice President Gore, has been re evaluating the position taken under the Bush Administration, and has shown some signs of acceptance of the doctrine as a policy tool; US Environment Protection Agency has likewise expressed its support to the principle with respect to low level radioactive wastes disposal at sea; Macdonald, *supra* n. 97, at 283, n.117.

(99) The existence of local customs is subjected to similar formative elements, yet based on the practice of a more limited group of States; see *Case concerning Right of Passage over Indian Territory (Merits)*, Judgment of 12 April 1960: *ICJ Rep.* 1960, 6.

interpretation and implications of the precautionary principle⁽¹⁰⁰⁾ both at the international⁽¹⁰¹⁾ and national levels⁽¹⁰²⁾.

This leads us to the other basic element formative of a custom, largely neglected by those invoking the customary character of the precautionary principle, viz. the norm-creating character of the candidate rule, which implies a minimum degree of precision of the actual content and implications thereof. In its famous *dictum* in the *North Sea Continental Shelf* cases, the ICJ held that «[i]t would in the first place be necessary that the provision concerned should, at all events, potentially be of a fundamentally norm-creating character such as could be regarded as forming the basis of a general rule of law»⁽¹⁰³⁾.

Apart from the elementary inconsistency with respect to the very denomination of the precautionary principle⁽¹⁰⁴⁾, the clear lack of consensus even on its basic

(100) Most importantly, the lack of agreement on where to draw the line between an acceptable and unacceptable risk, as well as the lack of clarity on the degree of proof required in both case, and the nature and extent of the measures to be taken to address the risks.

(101) See for instance the divergent positions of the States parties to the Second International Conference on the Protection of the North Sea with regard to the final declaration, in Cameron & Abouchar, 'The Precautionary Principle', at 4 *et sequ.*; see also EC reluctance to enact a precautionary policy with regard to the use of CFCs, in Benedick, *supra* n. 68, Chap. 2.

(102) Reh binder, *Das Vorsorgeprinzip im internationalen Vergleich*. Although only indirectly relevant for the present paragraph, the divergence in States' interpretation and application of the precautionary principle at national level is indicative of a lack of real consensus on the meaning of the concept of precaution in general.

(103) See *North Sea Continental Shelf, Judgment, ICJ Rep. 1969, 3, Para. 72*; more exactly, the determinacy of a norm influence its efficiency more than its legal status; Bodansky, 'Customary (and Not So Customary) International Environmental Law', 3 *Indiana Journal of Global Legal Studies* (1995), 105, at 118, and *supra* Chap. 1/2/iii. Legal Framework. The norm-creating character of a rule implies that the content and concrete implications of the latter are clear enough to allow the potential subject of the rule to foresee the consequence of their actions; see further van Dijk, 'Normative Force and Effectiveness of International Norms', 30 *German YbIL* (1987), 9.

(104) Some documents refer to a precautionary approach, others to precaution principle approach, or simply to the precautionary principle. The importance to attribute to these linguistic inconsistencies is unclear. Some authors dismiss them as irrelevant and regard the expressions as synonymous; see for instance Freestone, *supra* n. 98; Nollkaemper, 'The Precautionary Principle in International Environmental Law: What's New under the Sun?', 22 *MPBull.* (1991) 107; Primrosch, *supra* n. 68, at 229; Stebbing, 'Environmental Capacity and the Precautionary Principle', 24 *MPBull.* (1992), 287. Other understand the reference to precautionary *approach* in 1992 Rio Declaration on Environment and Development and 1992 Agenda 21, as illustrative of States' reticence to the precautionary *principle*; Hey, inspired by the ordinary meaning attributed to *principle* and *approach*, suggests that precautionary principle constitutes «a general rule adopted as a guide for developing international environmental policy», while precautionary approach would represent «a way of considering or handling environmental problems»; 'The Precautionary Concept in Environmental Policy and Law: Institutionalizing Caution', 4 *Georgetown IELR* (1992), 303, at 304 (emphasis added); also Kovar, 'A Short Guide to Rio Declaration', 4 *Colorado JIELP* (1993), 119, at 134. Scovazzi suggests that the formula of precautionary approach evokes «...così più una linea di condotta pratica che un principio teorico»; 'Sul Principio Precauzionale Nel Diritto Internazionale Dell'Ambiente', 75 *Rivista di Diritto Internazionale* (1992), 699, at 700. The 'approach-principle' distinction was taken as an argument by the US and Canada in the dispute that opposed them to the EC over EC restrictive measures concerning meat and meat products (*continued*)

substantive implications seriously undermines its effectiveness as a general principle of law. Indeed, while it is now recognised that, in certain circumstances and with respect to specific issues, States are no longer legitimated in delaying the imposition of effective mechanisms to minimise or suppress certain risks of pollution or depletion, the question of thresholds remains unclear. The degree of risk and scientific certainty that would require the adoption of precautionary measures is still to be clarified.

In the running of the Bergen Ministerial meeting, the US expressed its hostility to the open-ended language adopted by the 1990 Bergen Ministerial Declaration on Sustainable Development in these words:

«The US government strongly believes that we cannot commit ourselves to “anticipate, prevent and attack the causes of environmental degradation even if final scientific proof is lacking” (...) [and] does not believe that we can lightly accept above language in the expectation that [the language proposed] will be forgotten with the passage of time.»⁽¹⁰⁵⁾

The US statement was a covert criticism directed at some European States which had abstained from formally opposing the Declaration, but clearly intended to substitute their own definition of the principle of precaution for that proposed in the Declaration.

In the light of the lack of determinacy of the core concept of precautionary principle, part of the doctrine regards it as an overwhelmingly political principle⁽¹⁰⁶⁾ or moral injunction⁽¹⁰⁷⁾, or qualifies it as a new label put on the classic principle of prevention⁽¹⁰⁸⁾. Some other authors, while admitting a potential crystallisation of principle into customary law, underline that lack of coherent and converging

(hormones). The US and Canada argued, against the EC's conclusions, that the 'precautionary principle' does not represent a *principle* of customary international law; «it may be characterized as an 'approach' - the content of which vary from context to context»; WTO Appellate Body Report in the matter of *EC Measures Concerning Meat and Meat Products (Hormones)*, WT/DS26/AB/R, WT/DS48/AB/R 16 January 1998, Para. 43; available on the WTO Web Site @ <<http://www.wto-org>>.

⁽¹⁰⁵⁾ ECO, May 10, 1990, No. 2 ('US Memo reveals fierce opposition to the precautionary principle'), as referred to in Cameron & Wade-Gery, *Addressing Uncertainty*, 31.

⁽¹⁰⁶⁾ Chisholm & Clarke, 'Natural Resource Management and the Precautionary Principle', in Dommen (ed.), *Fair Principles for Sustainable Development* (Edward Elgar, for UNCTAD, 1993), Chap. 7; Dovers & Handmer, 'Ignorance, the Precautionary Principle, and Sustainability', 24 *Ambio* (1995), 92; O'Riordan, *Interpreting the Precautionary Principle*; Stebbing, *supra* n. 104. In the EC context, it is generally recognised that 1992 EU Treaty Art. 130(r)(2) sets forth principles for EC environmental policy in general, but as such, imposes no concrete, immediate and justiciable obligations upon States; the responsibility rests upon the Council of the EC to determine the actions and measures to be taken it has therefore a political more than legal content; Krämer, *E.C. Treaty and Environmental Law*, 2nd edn (Sweet & Maxwell, 1995), Paras. 2.15-2.17. Such approach has been confirmed by the European Court of Justice, which stated that «...Article 130r is confined to defining the general objectives of the Community in the matter of the environment»; EEC *Peralta* case, C-379/92, [1994] ECR I-3453, Para. 57.

⁽¹⁰⁷⁾ Dovers, Norton & Handmer, 'Uncertainty, Ecology, Sustainability and Policy', 5 *Biodiversity Conservation* (1996), 1143.

⁽¹⁰⁸⁾ Nollkaemper, *supra* n. 104.

interpretation «seriously undermine its normative character and practical utility»⁽¹⁰⁹⁾, and insist on the necessity for States to agree upon a settled meaning⁽¹¹⁰⁾. Bodansky, generally sceptical of the practical usefulness of the recognition of a 'declarative norms of behaviour' as customary law, reaches the following conclusion:

«States are told (...) to avoid significant transboundary pollution, but what constitutes 'significant'? They ought to undertake precautionary action, but in what circumstances and to what degree? As result of this vagueness, states may basically do what they like and argue that their actions are consistent with customary international law.»⁽¹¹¹⁾

In the same spirit, some other authors stress that

«Although the precautionary principle is useful as a general goal, it is unsuitable as the ultimate solution [for climate change]. As it does not specify how much caution should be taken, it is too vague to serve as a regulatory standard. In order to know how and when to apply the precautionary principle, one needs to know the risk and the uncertainty of an activity.»⁽¹¹²⁾

It is undoubtedly premature to assert the existence under international customary law (and international treaty law in general) of a *mandatory* principle of precaution, whereby States are to take specific precautionary environmental measures notwithstanding the lack of correlational scientific evidence. Nevertheless, recurrent references to the precautionary principle in both political and legal documents make it difficult to dismiss as totally irrelevant or mere wishful thinking. There is a growing recognition among States and in the doctrine that, with respect to a number of particularly serious environmental issues such as climate change, ozone layer depletion

(109) Beyerlin, 'Rio-Konferenz 1992: Begin einer globalen Umweltrechtsordnung?', 54 *ZöoRV* (1994), 124, at 243; Birnie & Boyle, 97-98; also Birnie, 'International Environmental Law: its Adequacy for Present and Future Needs', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 2, at 80.

(110) Bodansky, 'Remarks on New Developments in International Environmental Law', *ASIL Proc.* (1991), 413, at 417; Cameron, 'The Status of the Precautionary Principle in International Law', in O'Riordan & Cameron, Chap. 15; Cameron & Wade-Gery, *Addressing Uncertainty*; Cameron & Abouchar, 'The Precautionary Principle'; Freestone, *supra* n. 98; Gündling, 'The Status in International Law of the Precautionary Action', *supra* n. 51; Handl, 'Environmental Security and Global Change', in Lang *et al.* (eds.), *Environmental Protection and International Law* (Martinus Nijhoff, 1991), Chap. 2; Holder, *supra* n. 80; Jurgielewicz, *Global Environmental Change and International Law: Prospects for Progress in the Legal Order* (University Press of America, 1996), 65; Macdonald, *supra* n. 97; Porter & Welsh Brown, *Global Environmental Politics* (Westview, 1991), at 155; Sands, *Principles* (Vol. I), 212-13.

(111) 'Customary (and Not So Customary) International Environmental Law', 3 *Indiana Journal of Global Legal Studies* (1995), 105, at 118.

(112) van Beukering & Vellinga, *supra* n. 69, at 11.

or fisheries management, state action can no longer be postponed on the ground of scientific uncertainty; *in dubio pro natura*⁽¹¹³⁾.

On the other hand, it is still to be clarified (a) the degree of seriousness of the issue at stake, (b) upon whom it falls to prove that the degree of seriousness of an issue calls for precautionary action, and (c) the nature and extent of the precautionary measures required. Meanwhile, and perhaps ironically, «the undefined nature of the principle may be responsible for its inclusion in various international treaties and discourse»⁽¹¹⁴⁾.

3. Constitutive Elements of a Precautionary Principle

The principle of precaution shares two of the three constitutive elements of the principle of prevention, and can be distinguished from the latter essentially on its third constitutive element.

i. Object of Precaution

Like prevention, precaution concerns potentially any sort of product of any types of activity having an impact on the environment of other States or the common environment⁽¹¹⁵⁾ which might, but need not, be prohibited by law. The toxic or dangerous character of a product, or the hazardous nature of an activity do not necessarily make such product or activity unlawful.

(113) Backes & Verschuuren, *supra* n. 67, at 44.

(114) Macdonald, *supra* n. 97, at 269.

(115) *Viz.* areas beyond state jurisdiction. One could argue that international law precludes a State from causing irreversible damage to its own environment, but serious difficulties remain with regard to the enforcement of such prohibitory rule under the present state of international environmental law, even if the theory of an *erga omnes* obligation to protect the environment is followed, such obligation relates to shared or common environment, and do not apply to purely 'domestic' environment. Primrosch, 'Das Vorsorgeprinzip im internationalen Umweltrecht', 51 *ZöR* (1996), 227, at 234; Singh, Foreword in Munro & Lammers, *Environmental Protection and Sustainable Development: Legal Principles and Recommendations* (Graham & Trotman/Martinus Nijhoff, 1987), at xi. Further *infra* Chap. 2/3. The Principle of Permanent Sovereignty over Natural Resources: a Principle of Customary Law and Chap. 2/4/ii/c. Limits Arising from General Environmental Considerations.

One should note in this respect that the obligation to protect the natural environment from 'widespread, long-term and severe damage in time of hostilities (see 1977 Protocol I Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts, Art. 55(1)) does not apply in time of 'non international armed conflict', as no reference to such obligation is contained in 1977 Protocol II Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of Non-International Armed Conflicts. Likewise, the obligation made to State 'not to engage in military or any other hostile use of environmental modification techniques' concerns only those techniques having «widespread, long lasting and severe effects as the means of destruction, damage or injury to any *other* State Party»; 1977 ENMOD Convention, Art. I(1) (emphasis added).

ii. Risk-Harm to be Averted/Minimised

As seen earlier on, the prevention principle was originally related to *serious, substantial* or *definitive* transboundary harm⁽¹¹⁶⁾, with the noticeable exception of the 1972 Stockholm Declaration on the Human Environment, Principle 21, which omits to qualify the harm to be averted⁽¹¹⁷⁾. Likewise, the majority of recent statements of the principle of prevention and of the principle of precaution⁽¹¹⁸⁾, together with a nearly unanimous doctrine⁽¹¹⁹⁾, link the duty to take preventive measures to *qualified* harm or risk due either to its magnitude (*significant* harm or risk)⁽¹²⁰⁾ or to the persistence and/or irreversibility of its effects⁽¹²¹⁾.

(116) See *supra* n. 19 to 21.

(117) See *supra* n. 31; the qualification of the harm was also omitted in 1992 Rio Declaration, Princ. 2, but was clearly specified in Princ. 15.

(118) Significant exceptions to this rule include the 1991 Bamako Convention on Transboundary Movement of Hazardous Wastes, which relates precautionary measures to wastes without any further qualification Art. 4(3)(f); see also 1992 OSPAR Marine Environment Convention, Art. 2. In the same way, some documents refer to precaution *in vacuo* without even linking it to a specified damage; see 1992 Maastricht treaty, Art. 130r(2); Convention, Protocol and Amendments on the Ozone Layer (1985, 1987, 1990). At the other extreme, certain instruments relate exclusively to particularly grave damage, *viz.* to widespread, long term and severe environmental damage; see 1977 Protocol I Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts, Art. 55(1); 1977 ENMOD Convention, Art. I(1). See also the 'massive pollution' criterion under 1980 ILC Draft Articles on State Responsibility, Art. 19(3)(d).

(119) See *contra* Birnie & Boyle, 99.

(120) See *inter alia* 1992 Biodiversity Convention (preambular Para. 8); 1992 Climate Change Convention, Art. 3(3); 1992 ECE Watercourses Convention, Art. 1(2); 1992 ECE Industrial Accidents Convention, Art. 1(d); 1991 ECE Convention on Environmental Impact Assessment, Art. 2(1); 1988 CRAMRA, Art. 1(15), 4 and 8; 1985 Vienna Convention on the Ozone Layer, Art. 1(2); 1982 UNCLOS, Art. 206 and 220(5); 1979 ECE Transboundary Air Pollution Convention, Art. 5. See also 1978 UNEP Draft Principles on Shared Natural Resources; 1986 US Third Restatement of the Law, § 602(1)(b); 1987 UNEP Guideline on Environmental Impact Assessment, Para. 1; 1990 Bergen Ministerial Declaration on Sustainable Development, Para. 7; 1991 OECD Recommend. C(90)164, on Integrated Pollution Prevention and Control; 1992 Rio Declaration on Environment and Development, Princ. 15.

1982 World Charter for Nature suggested classification of the potential damage and adaptation of the preventive measures to be taken proportionally to the magnitude of a potential damage (irreversible, significant, unqualified); only those activities that are likely to cause *irreversible* damage (Para. 11(a)) and activities that *are likely* to pose a *significant* risk but where potential adverse effects are not fully understood (Para. 11(b)) should not proceed. Whereas the activities that *are likely* to pose a *significant* risk (and which effects are fully understood) should be preceded by exhaustive examination, and demonstration that benefits outweigh potential dangers to nature, Para. 11(b). For those activities that *may disturb* the environment, environmental impact studies shall be made sufficiently in advance, Para. 11(c). It is also contended that the 'black and grey lists' (see *infra* n. 150 and 151) replace the qualification of 'significant adverse environmental effects'; Sachariew, 'The Definition of Thresholds of Tolerance for Transboundary Environmental Injury under International Law: Development and Present Status', 37 *Netherlands ILR* (1990), 193, at 199.

Whilst a certain degree of consensus emerges on the exclusion of *de minimis* harm from the material scope of both the precautionary and prevention principles⁽¹²²⁾, the dividing line between *serious* damage and *tolerable* damage remains the object of an ongoing controversy. The major difficulty relates to the fact that 'significant harm', 'serious harm' and 'substantial harm' have been traditionally understood to signal *legally* significant injury; accordingly, they do not merely reflect a 'factual finding of a non substantial transboundary impact' susceptible of objective appraisal or objective quantification⁽¹²³⁾. No legal parameter has ever been defined to interpret this legal notion⁽¹²⁴⁾.

One suggestion is to qualify the harm both according to its magnitude and in the light of the equitable utilisation principle⁽¹²⁵⁾. Another would consist in defining the harm in the light of various concrete circumstances apart from the factual seriousness of the harm itself, such as:

«[T]he respective state of development of technically advanced facilities, the usual degree of pollution which is emitted by such facilities, the prior degree of pollution of the respective area and the hereby resulting restriction in

(121) Some documents, mostly, but not only related to pollution, identify the risks to be averted by the persistence or irreversibility of their effects; this is the case for instance of the Ministerial Declarations on the Protection of the North Sea, *supra* n. 86; see also 1992 Rio Declaration on Environment and Development, Princ. 21; 1992 Climate Change Convention, Art. 3(3). Reference was made to 'irreparable damage and substantial prejudice in Nauru's claim, in *Certain Phosphates Lands in Nauru (Nauru v. Australia), Preliminary Objections, Judgment, ICJ Reports 1992*, 240, and in the original Hungarian Application to the International Court of Justice on the Diversion of the Danube River, reproduced in Sands, *Principles* (Vol. IIA), No 28. The irreversibility of the damage is also adopted by Judge Weeramantry in his dissenting opinion in *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case, ICJ Rep. 1995*, 288, (diss.op.) at 342.

(122) See appended definition of 'significantly affect' in 1978 UNEP Draft Principles on Shared Natural Resources; definition of significant in 1986 US Third Restatement of the Law, § 601, Comment (c); 1986 WCED-EG Legal Principles for Environmental Protection and Development, Art. 10 and comment; 1988 ILC Draft Articles on the law of Non-Navigational Uses of International Watercourses, Art. 8 and Commentary, in 1988 *YbILC* Vol. II Pt. 2, at 36; 1996 ILC Draft Articles on International Liability, Art. 2(a). See also more generally definition of damage to Antarctica environment, 1988 CRAMRA Art. 1(15), excluding 'negligible' damage or damage acceptable pursuant to the Convention; and 1993 ECE Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, Art. 8(d), excluding responsibility for damages at 'tolerable levels' under local circumstances. In the doctrine, see Birnie & Boyle, 98-99; Handl, 'National Use of Transboundary Air Resources : The International Entitlement Issue Reconsidered', 26 *NRJ* (1986), 405, at 412; Sands, *Principles* Vol. I, at 633 *et sequ.*

(123) Handl, *supra* n. 122, at 414.

(124) Handl, *supra* n. 122, at 412; Wildhaber, 'Die Öldestillieranlage Sennwald und das Völkerrecht der Grenzüberschreitenden Luftverschmutzung', 31 *ASDI* (1975), 97, at 101.

(125) So-called dual-test theory; *supra* n. 24.

using the area by the burdened States. This means that the amount of pollution to be tolerated is dependent upon the extent in which technical development allows a reduction of emission.»⁽¹²⁶⁾

In this case, the degree of acceptability of the risk or harm would be measured according to similar criteria as the extent of the measures to be taken to minimise or avert such risk/harm⁽¹²⁷⁾.

A third possibility would consist in the equation of significant harm at law and significant harm in fact⁽¹²⁸⁾. The work of the International Law Commission, both in the area of the non navigational use of transboundary watercourses and international liability for injurious consequences arising out of acts not prohibited by international law, seems to indicate a 'factual yet circumstantial' evaluation of the significance of environmental harm. The significance would thus be determined «by factual and objective criteria», as well as «a value determination which depends on the circumstances of a particular case and the period in which such determination is made»⁽¹²⁹⁾.

(126) Wolfrum, 'Purposes and Principles of International Environmental Law', 33 *German YbIL* (1990), 308, at 311.

(127) See *infra* 5/i. Financial and Technical Limits.

(128) For a brief review of the arguments in favour and against this approach, see Handl, *supra* n. 122, at 421 *et sequ.* (n. 86-92).

(129) 1996 ILC Draft Articles on International Liability, Art. 2 and commentary, UNGA, Report of the ILC on Its Work of its 48th Session (May 6-July 26, 1996), GAOR Fifty-first Session, Suppl. No. 10 (A/51/10), 125, at 258-259 and 261; also 1994 ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, Art. 7, kept *tel quel* in 1997 UN Convention on the Non-Navigational Uses of International Watercourses (Art. 7). It should be underlined however, that earlier ILC drafts on both issues were worded in terms of *appreciable* harm or risk which was explicitly used in the sense of 'substantial' (see *infra* n. 133); see for instance Barboza's fourth Report on international liability for injurious consequences arising out of acts not prohibited by international law, Doc.A/CN.4/413, 1988 *YbILC* Vol. II, Pt. 1, Commentary to Art. 2(c), Para. 30; 1988 ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, Art. 8. The shift to *significant* threshold was suggested in the early 1990s, «because it conveys something rather more substantial or greater magnitude than does the word 'appreciable'»; Barboza, seventh Report on international liability for injurious consequences arising out of acts not prohibited by international law, A/CN.4/437, 1991 *YbILC* Vol. II, Pt. 1, 71, at Para. 31. Appreciable harm/risk was understood as embodying *factual* standards only, hence capable of being established by objective evidence; 1988 ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, commentary to Art. 8. In the same vein, an appreciable risk refers to «one involves greater than normal likelihood of causing transboundary injury during the entire course of an activity (...) but also visible on first examination»; the risk must thus be 'objectively and appreciably' perceptible according to normal criteria or standards for the uses of the things which are the object or the product of an activity, or the result of the situation created»; see Barboza's fourth Report, *supra*, Paras. 26 and 30, commentary to Arts. 2(a)(II) and 2(c).

The international legal definition of the threshold of a tolerable transboundary harm or interference is further complicated by the multiplication of qualifications of the harm, and a not always consistent interpretation and use of such qualifications. Substantial, serious and significant are thus used sometimes indifferently as synonymous⁽¹³⁰⁾, whilst they are clearly differentiated in other instances. Appreciable, for instance, is assimilated to 'not insignificant or barely detectable but not necessarily 'serious'⁽¹³¹⁾, and is clearly distinguished from significant⁽¹³²⁾. Other times, the words 'significant', 'important' or 'substantial' are held for giving an idea of higher thresholds than 'appreciable'⁽¹³³⁾. Significant is also construed as referring to any 'appreciable effect to the exclusion of *de minimis* effect'⁽¹³⁴⁾, or to 'effect still more than detectable but not necessarily at the level of serious or substantial'⁽¹³⁵⁾. Substantial harm equally qualifies a harm 'which is not minor or insignificant'⁽¹³⁶⁾. It is agreed, however, that the 'significant' threshold, widely used in most recent environmental law documents, is lower than the 'serious' threshold developed in the *Lac Lanoux* and *Trail Smelter* arbitrations⁽¹³⁷⁾.

Excepted from few cases where 'mathematical quantification' of a given harm or risk can be determined⁽¹³⁸⁾, it seems difficult, if not impossible, to set clear and uniform

(130) See for instance Schwebel, third Report on the Law of the Non-Navigational Uses of International Watercourses, A/CN.4/348, 1982 *YbILC* Vol. II, Pt. 1, 65, at 100.

(131) 1988 ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, commentary to Art. 8.

(132) McCaffrey, fourth Report on the Law of the Non-Navigational Uses of International Watercourses, A/CN.4/412 and Add. 1 and Add. 2, 1988 *YbILC* Vol. II, Pt. 1, 205, at 238.

(133) Barboza, fifth Report on international liability for injurious consequences arising out of acts not prohibited by international law, A/CN.4/423, 1989 *YbILC* Vol. II, Pt. 1, 131, at Para. 25.

(134) 1978 UNEP Draft Principles on Shared Natural Resources.

(135) 1996 ILC Draft Articles on International Liability, Art. 2 and commentary, *supra* n. 129; McCaffrey, *supra* n. 132.

(136) 1986 WCED-EG Legal Principles for Environmental Protection and Development, Art. 10.

(137) *Supra* n. 19 to 21. See Sachariew, 'The Definition of Thresholds of Tolerance for Transboundary Environmental Injury under International Law: Development and Present Status', 37 *Netherlands ILR* (1990), 193; *contra* Handl, *supra* n. 122, at 412. Handl considers the international legal threshold of impermissible natural resource use transgressed only where 'serious', 'significant' or 'similarly qualified' transboundary effects occur.

(138) Such as for instance emission standards; see the list of transboundary quantities of hazardous substances appended to OCED Council dec. C(88)84 (Final), on the Exchange of information concerning accidents capable of causing tranfrontier damage, 28 *ILM* (1989), 247. The difficulty to find agreement on
(continued)

thresholds of acceptable harm beyond which States are expected to take precautionary and preventive measures. Such thresholds imperatively to be defined on a case-by-case basis⁽¹³⁹⁾. On the other hand, the definition of some general criteria, *inter alia* with regard to the nature and weight of the values against which the importance of the harm is to be assessed, is a condition *sine qua non* to the efficiency of the principles of prevention and precaution.

iii. Causality Link Between the Object and the Harm/Risk

The major distinctive feature of a precautionary approach relates to the causal link between the product or activity considered, and the anticipated risk or harm. While the establishment of a causal link, if not by clear and convincing scientific evidence, at least in an objective and reasonable way, represents an important constitutive element in the prevention-based action⁽¹⁴⁰⁾, the existence of a causal link is presumed⁽¹⁴¹⁾ or regarded as non decisive where the enactment of precautionary measures is required, «even where there is no conclusive evidence of a causal relationship between the inputs and the effects»⁽¹⁴²⁾; «the lack of full scientific certainty should not be used as a reason for postponing such [precautionary] measures...»⁽¹⁴³⁾.

In this respect, the approach based on the precautionary principle reflects a decisive, albeit not total⁽¹⁴⁴⁾, departure from the classic assimilative capacity approach prevailing in the 1970s and early 1980s. The latter is grounded in the following two-fold assumption:

- (1) the unlimited assimilative capacity and inexhaustible self-regenerative capacity of the ecosystem;

compulsory emission and reduction standards however, was particularly well illustrated by the recent negotiation on binding target for emission reduction, and previously, on transboundary air pollution and cut backs in sulphur dioxides; Epiney, 'Das "Verbot erheblicher grenzüberschreitender Umweltbeeinträchtigungen" : Relikt oder konkretisierungsfähige Grundnorm?', 33 *AVR* (1995), 309, at 336 *et sequ.*; Fraenkel, 'The Convention on Long Range Transboundary Air Pollution: Meeting the Challenge of International Cooperation', 30 *Harvard JIL* (1989), 447, at 465 *et sequ.*

(139) Epiney, *ibid. supra* n. 138; Handl, *supra* n. 122; Sachariew, *supra* n. 137.

(140) *Supra* n. 41.

(141) As it is the case for the documents resorting to the appendix/list/annex classification; see *infra* n. 150 and 151.

(142) 1992 OSPAR Marine Environment Convention, Art. 2(2)(a).

(143) 1992 Climate Change Convention, Art. 3(3).

(144) *Infra*, Limits Pertaining to Technological and Financial Capacities.

(2) the ability of science and modern technologies to predict accurately environmental threats and establish the exact measures needed to avert them.

The preventive approach questions the first part of the assumption, without reconsidering however the major parameters of environmental action, namely science and technology. A step in this direction is taken with the precautionary principle, insofar as is recognised that «science does not always provide the insight needed to protect the environment effectively»⁽¹⁴⁵⁾.

Under the classic preventive approach, the onus rests upon the entity that opposes a given action/product to establish, with 'clear and convincing evidence'⁽¹⁴⁶⁾, the existence or likelihood of the alleged impact or effect, as well as the causality between the challenged action/product and the alleged impact/effect. Such approach has proved inappropriate. The evolution of technologies and the hypothetical environmental risks entailed therefrom, and widespread environmental degradation⁽¹⁴⁷⁾ have largely illustrated the inadequacy of such approach in a 'modern' society.

The burden of proof is reversed *to a certain degree* where a precautionary approach applies, although it remains undecided which degree of certainty is required to demonstrate (or dismiss) (a) the causality link and (b) the acceptability of the risk⁽¹⁴⁸⁾. One possible but extreme understanding of the precautionary principle would imply the demonstration, to an extent close to certainty, that the intended activity or particular product would, in the particular circumstances of the case, cause no *substantial* harm to the environment⁽¹⁴⁹⁾. A less stringent and more realistic interpretation of the reversal of

(145) See comparative examination of the classic and precautionary approach in Hey, 'The Precautionary Concept...', 4 *Georgetown IELR* (1992), 303, at 308/9; see also Stebbing, *supra* n. 104.

(146) *Trail Smelter* case (Final Award), 35 *AJIL* 684, at 716; no further criteria are indicated *inter alia* on the degree of clarity and certitude required. One should bear in mind, however, that the principle of prevention originally emerged in relation to specific and often clearly identifiable sources of pollution, as in the *Trail Smelter* case for instance; Fraenkel, *supra* n. 138, at 451.

(147) See Kirgis, 'Technological Challenge to the Shared Environment: United States Practice', 66 *AJIL* (1972), 290, at 294 *et sequ.*; also Wildhaber, *supra* n. 124, at 118 *et sequ.*; Epiney, *supra* n. 138, at 352 *et sequ.*

(148) See variation in qualification of the risk to be averted, *supra* n. 120 to 122; see also Bodansky, 'Scientific Uncertainty and the Precautionary Principle', 33 *Environment* (1991), 4; Cameron, 'Future Directions in International Environmental Law: Precaution, Integration and Non-state Actors', Paper presented at the Read Memorial Lecture for 1995, 19 *Dalhousie LJ* (1996), 122, at 126.

(149) Boyle, 'Land-based Sources of Marine Pollution', 16 *Marine Policy* (1992), 20, at 24. Hence, under the system of prior justification procedures, introduced by OSCOM Decision 89/1, on the Reduction and Cessation of Dumping Industrial Wastes at Sea (1989), it falls upon the applicant to demonstrate *inter alia* that the dumping of banned industrial wastes will, in the particular case, cause no harm in the marine environment. Under the 1992 OSPAR Marine Environment Convention, certain States (France and UK) are admitted to benefit from an exemption to the all-ban of the dumping of wastes into the North Sea by 1999, but shall justify such exception with regular reports to the Commission on the results of scientific studies which demonstrate that «any potential dumping operations would not
(continued)

proof would require, from the part of the person or entity intending to engage into an *a priori* prohibited activity⁽¹⁵⁰⁾ or to use a banned product⁽¹⁵¹⁾, the demonstration that the impact of the intended activity in the particular circumstances of the case, as it can be reasonably predicted⁽¹⁵²⁾, stays within the limits of acceptability⁽¹⁵³⁾. Whilst there is a certain agreement on the impracticability of the requirement of a rigorous proof of

result in hazards to human health, harm to living resources or marine ecosystems...»; Annex II, Art. 3(3)(c). Likewise, 1996 Protocol to 1972 London Convention on Dumping of Wastes abandons the classic black/grey lists system, based on the principle of authorised dumping except for substances listed, to adopt the 'reverse listing' procedure (Art. 4), whereby any dumping of any wastes or other matter is prohibited, with the exception of those exhaustively listed in Annex.; the Protocol substantially modifies the original regime set forth in the Convention, and provides that the High Contracting Parties shall be 'guided by', or 'apply' «a precautionary approach to environmental protection from disposal and incineration of wastes and other matter at sea whereby appropriate preventive are taken when there are reason to believe that substances or energy introduced in the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects» (Art. 3).

(150) Thus for instance, in the case of 'species' conservation documents which adopt the 'appendix' classification, any species included in the red appendix is presumed endangered and therefore excluded from any kind of exploitation, unless the best scientific evidence available indicate that the intended exploitation would be of no danger to the survival of the particular species. The deletion or downgrading of a species from appendices is submitted to similar conditions; see 1979 Bonn Convention on the Conservation of Migratory Species, Art. III; 1979 Bern Convention on the Conservation of European Wildlife. The appendix-based documents remain more classic however with regard to the inclusion of species to appendix, also subjected to scientific evidence of the threat or extinction; Christie, 'The Eternal Triangle: The Biodiversity Convention, Endangered Species Legislation and the Precautionary Principle', 10 *EPLJ* (1993), 470. Until recently, the same could be written of the 1973 CITES and related 1976 Bern Criteria for the Addition of Species and other Taxa to [CITES] Appendices I & II, and for the Transfer of Species and Other Taxa from [CITES] Appendix II to Appendix I; see CITES, *Proceedings of the First Meeting of the Conference of the Parties 2-6 November 1976* (IUCN, 1977), 31; reproduced in 2 *EPL* (1976) 189. The precautionary approach has been formally endorsed however, more particularly with regard to the listing procedures, in the new Listing Criteria for the Amendment of Appendices I and II (Everglades Criteria). The Everglades Criteria were unanimously approved at the Ninth Conference of the Parties to the 1973 CITES, in replacement of the 1976 Bern Criteria; see *supra* n. 150. See also 1988 CRAMRA, Art. 4 (3) and (4)); 1991 Antarctic Treaty Environmental Protocol, Art. 7. Interestingly, although the 1982 World Charter for Nature is essentially geared towards prevention, it provides that, for those activities which are likely to pose a significant risk to nature «...their proponents shall demonstrate that the expected benefit outweigh potential damage to nature, and where potential adverse are not fully understood, the activities should not proceed», Sect. I, Para 11(b).

(151) In a similar way to the appendix-based conservation, the anti-pollution documents which resort to the system of lists to eliminate (black list) or control and minimise (grey list) pollution by substances/activities in the respective lists, create a presumption with respect to those activities, which can be reversed by the applicant only with due evidence of the lack of causality between the banned product, and the anticipated risk/harm. Like the conservation documents however, such lists are drafted on the basis scientific evidence; see for instance the Basel Hazardous Wastes Convention (1989); see also Framework Directive 76/464/EEC, on Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment of the Community, [1976] OJ L129/23 (later amended); Framework Directive 80/68/EEC, on the Protection of Groundwater, lists I and II (appended), [1980] OJ L20/43 (later amended).

(152) Most documents referred here which advocate a precautionary approach provides for the assessment of the environmental risk/harm according to the best available/practicable means; see *infra* 4/i. Unilateral Duty of Due Diligence and 5/ii. Preservation of Incentives.

(153) Hence still allowing for a certain degree of uncertainty; Birnie & Boyle, 97.

causation and irrefutable evidence, the degree of proof sufficient to allow for a potentially hazardous activity to be carried out is still to be clarified.

Considering both the pervasive scientific uncertainty and the multiplicity of causes of environmental damages⁽¹⁵⁴⁾, it is often difficult to rigorously identify and regulate all sources of environmental degradation. Consequently, the adoption of a causality-based (classic) definition of environmental harm, and the subordination of the enactment of preventive measures to the proof of a clear causal link between an action and an environmental injury, means that in practice and for most cases of 'modern' pollution, no preventive measure is to be taken before the damage has actually occurred.

4. Operational Implications of the Precautionary Principle

The 'relativisation' of the importance of science and technologies as relevant parameters to assess and react to environmental risks have also certain implications with regards to the operational measures implied by a precautionary environmental policy. The measures entailed by precaution are, by-and-large, similar to those flowing from prevention; with the major difference lies with the degree of certainty of the risks such measures are related to.

i. Unilateral Duty of Due Diligence

The similarities in nature and differences in extent between the operational measures flowing from prevention and precaution is particularly blatant in the case of the unilateral duty of due diligence. In both instances, States are expected to enact some legal and administrative measures to prevent *ex ante* the occurrence and minimise *ex post* the impact of significant environmental harm *ex proprio motu*, according to the 'objective standards of diligent behaviour' under general international law⁽¹⁵⁵⁾. In the

(154) As Wolfrum pointed out, «...die Schädigung [wird sich nicht in der Regel] auf eine bestimmte Quelle zurückführen lassen»; 'Die grenzüberschreitende Luftverschmutzung im Schnittpunkt von nationalem Recht und Völkerrecht', 99 *DVBl.* (1984), 492, 495-496; Epiney, *supra* n. 138, at 351 *et sequ.* The problem of causality link is at the heart of a serious debate with respect to civil responsibility for environmental injuries in domestic law. The issue has been considered recently in Switzerland, within the frame of a general revision of the Swiss law of torts; see Revision Haftpflichtrecht, Wessner-Wiedmer Vorentwurf 18.12.1996; unpublished); see also Loser, *Kausalitätsprobleme bei der Haftung für Umweltschäden*, Ph.D thesis (Paul Haupt, 1994).

(155) Pisillo-Mazzeschi, 'The Due Diligence Rule and the Nature of International Responsibility of States', 35 *German YbIL* (1992), 9, at 42; Dupuy, 'Due Diligence in International Law of Liability', in OECD (ed.), *Legal Aspects of Transfrontier Pollution* (OECD, 1977), 369. Although there remains some doctrinal controversies on the objective or fault-related nature of diligence, international practice tend to favour the former conception, and assess diligence according to objective standards of behaviour, and 'such care as governments ordinarily employ in their domestic concern'; 1994 ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, commentary to Art. 7. Such interpretation is for instance reflected in the 1986 US Third Restatement of the Law, which provides that
(continued)

context of a preventive approach, the duty of due diligence is bound to activities or products which can objectively be linked to a substantial risk or harm⁽¹⁵⁶⁾. By contrast, the due diligence of the State under a precautionary approach might be committed at an earlier stage, when the causal link between an uncertain risk or harm and a product or activity has not yet been demonstrated with conclusive scientific evidence. In any case, States cannot be expected to anticipate the unpredictable⁽¹⁵⁷⁾ and is not committed to any specific result⁽¹⁵⁸⁾. In this respect, even a precautionary duty of due diligence is essentially relative and flexible, paradoxically conditioned and constrained by scientific and technological limits⁽¹⁵⁹⁾.

ii. Prior Information, Notification and Consultation

The duties of information and consultation⁽¹⁶⁰⁾ were extensively discussed and progressively accepted as a general rule under the 'regime of good neighbourliness'

diligence has to be measured by "generally accepted international rules and standards" (§ 601). This does not mean however, that any subjective elements is excluded from the evaluation of a diligent conduct and that State are bound by a universally equal duty of diligence; on the contrary, there are different degrees of diligence, each assessed in the light of such factors as the means and capacities of the State involved, the general state of knowledge, or the nature of the intended activity; Birnie & Boyle, 92-93; Pisillo-Mazzeschi, *ibid.*, at 43 *et sequ.* The flexibility of the diligence criterion had already been clearly expressed in the landmark *Alabama Claims* arbitration, defining due diligence, as «...proportioned to the magnitude of the subject and to the dignity and strength of the power which is exercising it»; (1872), *Alabama Claims* arbitration (1872), in 4 Moore *International Arbitrations*, 4144. Although stated in the context of the duties of neutral States in time of civil war, such definition can also apply to the context of environmental obligations; see ILC 1996 Draft Articles on International Liability, *GAOR, Fifty-first Session, Suppl. No. 10 (A/51/10)*, at 266 *et sequ.* (Art. 4); 1994 ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, commentary to Art. 7.

(156) See *supra* 2/b. The 1972 Stockholm Declaration on the Human Environment: Institutionalisation of Prevention.

(157) The maxim of *ad impossibilia nemo tenatur* (one cannot be obliged to perform the impossible) was invoked by Hungary in its Declaration Terminating Treaty concerning the Construction and Operation of the *Gabcikovo-Nagymaros* system of locks, as a principle accepted under international law; 32 *ILM* (1993), 1259, at 1283. See also Dovers & Handmer, 'Ignorance, the Precautionary Principle, and Sustainability', 24 *Ambio* (1995), 92.

(158) ILC 1996 Draft Articles on International Liability, *GAOR, Fifty-first Session, Suppl. No. 10 (A/51/10)*, at 266.

(159) Epiney, *supra* n. 138, at 346 *et sequ.*; Hinds, 'Das Prinzip 'sic utere tuo ut alicum non laedas' und seine Bedeutung im internationalen Umweltrecht', 30 *AVR* (1992), 298, at 323 *et sequ.* See *infra* 5/i. Financial and Technical Limits. In the comments on its suggested 1995 Draft International Covenant on Environment and Development, the IUCN opts for a conception of preventive duty as duty of conduct exclusively, and rejects that it implies a minimum threshold of harm; on the other hand, the IUCN appears to accept the existence of a maximum threshold of harm or tolerance, whereby States are due to ban totally certain particularly hazardous activities. In other words, the standard of diligence expected from States varies depending on the seriousness of the environmental risks incurred by a certain activity; IUCN & Environmental Law Center, *Draft International Covenant on Environment and Development*, Environmental Policy and Law Paper No. 31 (IUCN, 1995), 38, commentary to Art. 6 (Prevention).

(160) The consideration of prior information, notification and consultation under one single heading is (*continued*)

within the context of shared natural resource and under the general 'regime of prevention'. Such duties address the obligations of the source State to report to the potentially affected State on those activities performed within its territory or under its control⁽¹⁶¹⁾, which cause, or may cause, substantial harm beyond national borders or otherwise affect, or may affect, to a substantial measure, the equal right of other States to use the shared or common resources. Information duties have also long been established in situations of environmental emergency⁽¹⁶²⁾.

The duty to notify or inform about hazardous activities in general (outside the environmental context) lay at the heart of the *Corfu Channel* case, in which the International Court of Justice opted for a restrictive conception of such duty limited to those facts that States *know or have the means of knowing*⁽¹⁶³⁾. Whilst the

not meant to suggest that all three notions can be assimilated, nor that all are recognised as of an equally binding character. On the contrary, the controversy that took place most notably on the (in)admissibility of the linking of information and consultation (see *infra* 1972 Stockholm Declaration on the Human Environment, draft Art. 20), testifies to a parallel yet distinct evolution and final endorsement. Nevertheless, in the face of the increasing tendency to treat information, notification and consultation as necessary corollaries in treaty law (including in most of the documents considered here, apart from 1972 Stockholm Declaration on the Human Environment; see also 1982 Geneva Protocol Concerning Mediterranean Specially Protected Areas, Art. 6, imposing a duty of notification without prior information being prescribed), it appears both justified and convenient to address those duties as a whole rather than separately.

On the duty to inform in transboundary context, see Partan, "The Duty to Inform" in International Environmental Law', 6 *Boston University ILJ* (1989), 43; also Gündling, 'Prior Notification and Consultation', in Handl & Lutz (eds.), *Transferring Hazardous Technologies and Substances, The International Legal Challenge* (Graham & Trotman, 1989), Chap. 3; Handl, 'The Principle of 'Equitable Use' as Applied to Internationally Shared Natural Resources: Its Role in Resolving Disputes over Transfrontier Pollution', 14 *RBDI* (1978-79), 40, at 57; Wildhaber, *supra* n. 124, at 107 *et sequ.* See more generally Kirgis, *Prior Consultation in International Law: A Study of State Practice* (University Press of Virginia, 1983).

(161) States are also held accountable both for their own state-action, and the non-state actions or activities performed by public or private entities under their jurisdiction.

(162) See for instance: OECD Recommend. C(74)224 on Principles Concerning Transfrontier Pollution, Princ. 9; 1978 UNEP Draft Principles on Shared Natural Resources, Princ. 9(1); 1982 UNCLOS, Art. 198; 1990 Oil Pollution Preparedness Convention, Art. 5(1)(c); see also UNEP Regional Seas regime: 1978 Kuwait Protocol concerning Co-operation on the Protection in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency; 1981 Abidjan Protocol concerning Co-operation in Combating Pollution in Cases of Emergency; 1982 Jeddah Protocol concerning Regional Co-operation in Combating Pollution by Oil and Other Harmful Substances in Case of Emergency; 1981 Lima Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbon or Other Harmful Substances in Case of Emergency, Lima; 1985 Nairobi Protocol Concerning Co-operation in Combating Pollution in Case of Emergency, Nairobi; 1986 Noumea Protocol Concerning Co-operation in Combating Pollution Emergencies. See more recently 1992 Rio Declaration on Environment and Development, Princ. 18; 1992 Biodiversity Convention, Arts. 14(1)(d) and 14(3); 1997 UN Convention on the Non-Navigational Uses of International Watercourses, Art. 28. In certain cases, the duty of notification might be linked to close co-operation and assistance between responsible and potentially affected States (emergency notification system); 1982 UNCLOS, Art. 199; 1986 Early Notification Convention; 1992 ECE Industrial Accidents Convention, Art. 10; 1992 ECE Watercourses Convention, Arts. 14 and 15.

(163) *Corfu Channel case, Judgment of April 9th 1949: ICJ Rep. 1949, 4, at 19 et sequ.*

transposition of the *Corfu dictum* to environmental cases can be seriously questioned considering the difference in context of application⁽¹⁶⁴⁾, it is interesting to note that the International Law Commission had initially subordinated state liability for injurious consequences arising out of acts not prohibited by international law to the 'had-the-means-of-knowing' clause, referring expressly to the Court's *dicta*⁽¹⁶⁵⁾. The comment to that article further stated that «the *Corfu Channel* ruling was correct. It is applicable to the present topic if it is adapted to the circumstances involving liability under the draft articles and if it is based, in turn, on a further presumption: that in principle a State has the means of knowing, unless there is proof to the contrary»⁽¹⁶⁶⁾.

The existence of a general duty to negotiate according to the rules of good faith had already been clearly stated in an advisory opinion of the Permanent Court of International Justice in the early 1930s. The Court pointed out that such duty implies a duty to 'enter into negotiations' and pursue them 'as far as possible with a view of concluding agreements', but entails no duty to reach and conclude such agreements⁽¹⁶⁷⁾. The duty to resort to negotiation among other peaceful means for the settlement of dispute was subsequently incorporated in the UN Charter⁽¹⁶⁸⁾. Nevertheless, the extension of such general duty to environmental matters has met a strong opposition from the part of certain States, and was consequently substituted for the milder notion of 'consultation'⁽¹⁶⁹⁾.

The duty to inform and consult on environmental issues implicitly underlay the *Trail Smelter* arbitration, but was best expressed and developed in the *Lac Lanoux* arbitration. In the latter case, the Arbitral Tribunal endorsed the view that riparian States had a duty (a) to inform other riparian States on projects that will affect an international watercourse, and (b) to enter into comprehensive consultation before any substantial change in the regime of an international watercourse is actually undertaken.

(164) Birnie & Boyle, 90.

(165) First (1988) Draft Articles on International Liability, Art. 3.

(166) 1988 *YbILC* Vol. II Pt. 1, at 262, Para. 70. The 'had-the-means-of-knowing' clause was maintained in the 1989 and 1990 Draft Articles on International Liability (Art. 3(1)), with however explicit statement of the existing presumption (Art. 3(2)); the clause was abandoned in the 1996 version (see Arts. 3 and 4).

(167) *Railway Traffic Between Lithuania and Poland (Railway Sector Landwarów-Kaisiadorys)*, PCIJ Ser. A/B, Fascicule No 42, Advisory Opinion of October 15th, 1931, at 108 *et sequ.*; see also *Tacna-Arica* arbitration (Chile v. Peru) (1922), II *RIAA*, 921, at 929-930.

(168) Art. 33.

(169) The debates of ILC on International Liability are particularly informative on that issue; see for instance Barboza, 'Seventh Report on International Liability for Injurious Consequences Arising Out of Acts not Prohibited by International Law', 16 April 1991, A/CN.4/437, 1991 *YbILC* Vol. II Pt. 1, 71, at Para. 39.

The Tribunal, inspired from the decision of the Permanent Court of International Justice in the *Railway Traffic Between Lithuania and Poland* case, made it clear that information and prior consultation were not merely formal procedural conditions to any such change in the watercourse; the States are indeed expected to conduct consultations according to the rule of reason and good faith (obligation of means/conduct). The Tribunal also dismissed the contention of a prior mandatory consent (obligation of result)⁽¹⁷⁰⁾. Such conception of an international duty to inform and consult has been consistently reaffirmed in subsequent case-law⁽¹⁷¹⁾, and still prevails today⁽¹⁷²⁾. It must be underlined, however, that the theory of mandatory prior consent is applied for certain cases, most notably in the field waste management and trading of toxic substances⁽¹⁷³⁾. The duty to inform is also, to a certain extent, made compulsory where the obligation of prior environmental impact assessment applies⁽¹⁷⁴⁾.

Notwithstanding a clear recognition of a mandatory duty to inform, notify and consult in early case-law, any formal endorsement thereof in binding or non-binding rules met a certain opposition. It was extensively discussed at the 1972 Stockholm Conference on the Human Environment, although any reference to either duty in the final declaration (draft art. 20) was finally abandoned, over a dispute between Argentina and Brazil. While the former would tolerate no compromise over the full endorsement of a combined duty of prior information and consultation, Brazil pleaded for a limited duty of information, and a total exoneration «under conditions that, in [State's] founded

(170) 24 *ILR* (1957), 101, at 128 *et sequ.* Similar position was followed in the *Gut Dam arbitration*, *supra* n. 14; see also Bourne, 'The Right to Utilize the Water of International Rivers', 3 *Canadian YbIL* (1965), 187; Wildhaber, *supra* n. 124, at 113. The argument of mandatory prior consent is also brought forward by Hungary in its Declaration Terminating Treaty concerning the Construction and Operation of the *Gabcikovo-Nagymaros* system of locks, which it considers enshrined in the bilateral treaty between Hungary and Czechoslovakia, regulating the question of water management of boundary rivers; 32 *ILM* (1993), 1259, at 1286.

(171) *Inter alia* *North Sea Continental Shelf, Judgment*, *ICJ Rep.* 1969, 3, at Paras. 86-87; *Fisheries Jurisdiction (United Kingdom v. Iceland, Federal Republic of Germany v. Iceland)*, *Merits*, *ICJ Rep.* 1974, 3, at Para. 75. Some Judges however consider that a duty to negotiate and related obligations exist only with regard to disputes and within the limits of existing procedure for the peaceful settlement of disputes; see Judges Ammoun (sep.op.) and Morelli (diss.op.) in the *North Sea Continental Shelf* case, *ibid.*, at Para. 47 and Para. 21; also Gros (diss.op.) in *Fisheries Jurisdiction* cases, *ibid.*, at Para. 27. Generally on the obligation to negotiate on international environmental issues, see Rogoff, 'The Obligation to Negotiate in International Law: Rules and Realities', 16 *Michigan JIL* (1994), 141, at 157 *et sequ.*

(172) See for instance the original 1987 Montreal Protocol on the Ozone Layer, Art. 2(9); 1995 Straddling Fish Stocks Agreement, Art. 8(2).

(173) See 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Art. 4(1)(c)); 1989 UNEP Governing Council Amended London Guidelines for the Exchange of Information on Chemicals in International Trade; 1989 FAO Amended International Code of Conduct on the Distribution and Uses of Pesticides, Art. 2 (prior consent procedure).

(174) See *infra* iii. Prior Environmental Impact Assessment.

judgement, may jeopardise its national security, economic development or its national effort to improve [the] environment»⁽¹⁷⁵⁾. The duty to inform, notify and co-operate was couched, albeit in recommendatory terms, in the Programme of Action appended to the Declaration⁽¹⁷⁶⁾, and subsequently acknowledged in the 1972 UNGA Resolution 2995 (XXVII) on Co-operation Between States in the Field of the Environment. The Resolution was adopted on the initiative of Brazil, in an attempt to revive some of the ideas abandoned with the aborted 1972 Stockholm Declaration on the Human Environment, draft Principle 20⁽¹⁷⁷⁾; it provides that:

«[C]o-operation between States in the field of the environment, including co-operation towards the implementation of principles 21 and 22 of the Declaration of the United Nations Conference on the Human Environment, will be effectively achieved if official and public knowledge is provided of the technical data relating to the work to be carried out by States within their national jurisdiction, with a view to avoiding significant harm that may occur in the environment of the adjacent area;

(...) technical data referred to in paragraph 2 above will be given and received in the best spirit of co-operation and good-neighbourliness, without this being constructed as enabling each State to delay or impede the programmes and projects of exploration, exploitation and development of the natural resources of the States in whose territories such programmes and projects are carried out.»

A more assertive expression of the need to inform, this time linked to prior consultation, is contained in a subsequent resolution on Co-operation on the Field of the Environment Concerning Natural Resources Shared by Two or More States⁽¹⁷⁸⁾. The duty to inform, consult and negotiate according to the rule of good faith were subsequently consistently reaffirmed in (often non-binding) documents providing for equitable utilisation and substantial harm prevention⁽¹⁷⁹⁾. Repeated references in

(175) UN Doc. A/Conf.48/14, at 119, as reported in Sohn, 'The Stockholm Declaration on the Human Environment', at 499. A dispute over the construction of an hydroelectric facility upstream in Brazil, on a river that then flows into Argentina constituted the background of the intransigence of both States.

(176) *Inter alia* with respect to those activities carrying the risk of climatic effects (Recommend. 70), planned major water resource activities that may have a significant transboundary environmental effect (Recommend. 51) and the management of contiguous protected areas (Recommend. 37). In other areas, the Programme of Action would only urge for exchange of information often through competent institutions (existing or to be created) rather than directly between States (Recommend. 58, energy; Recommend. 56, mining and mineral processing; Recommend. 45, genetic resources management; Recommend. 35, national parks management), or it would provide for notification without referring to further consultation (Recommend. 51, major resource activities). Consultation and co-ordination are called for in the control of marine pollution (Recommend. 92).

(177) Sohn, *ibid. supra* n. 175.

(178) UNGA Res. A/3129 (XXVIII), on Co-operation on the Field of the Environment Concerning Natural Resources Shared by Two or More States (1973).

(179) *Inter alia*; 1974 NIEO Declaration, Art. 3; 1975 Economic Charter, Art. 3; 1974 OECD Recommend. C(74)224 on Principles Concerning Transfrontier Pollution, Princ. E and Annex 'Principle of Information and Consultation', Paras. 6-8; 1978 UNEP Draft Principles on Shared Natural Resources (Princ. 5-9); 1982 World Charter for Nature, Paras. 16 and 23; 1990 ECE Code of Conduct on
(continued)

binding documents⁽¹⁸⁰⁾ and a consistent pattern of state practice suggest that a duty to inform and consult has now emerged in customary international law that is independent from any specific treaty commitment⁽¹⁸¹⁾. Some authors express little doubt as to the existence of such an international legal duty to inform and consult «even in absence of an applicable treaty regime featuring such obligations», and infer a legal character of such duty from its necessary association to the well-established principle of equitable utilisation⁽¹⁸²⁾.

The procedural ‘informational’ duties are essentially three-fold:

- (1) Information on any reasonably available data that might be useful for prevention purposes *in general*, not necessarily in relation to a particular activity, such as the state or degree of pollution of shared area, or the degree of depletion of a particular resource or species.
- (2) Notification of *planned* activities that cause, or might cause, a significant adverse impact, and of environmental *emergencies*.
- (3) Consultation with the view of defining appropriate preventive measures to avoid or minimise the realisation of the risk⁽¹⁸³⁾.

In that respect, the precautionary approach brings no substantial innovations, except from the fact that, in theory, information and notification are due even with respect to potential risks the occurrence of which has not yet been demonstrated by conclusive evidence. However, it is obvious that no State is expected to communicate information

Accidental Pollution of Transboundary Inland Waters, Princ. IV; see also series of ILA rules and transboundary resources or pollution: 1966 Helsinki Rules, Arts. XXIX and XXX; 1982 Rules on Water Pollution in an International Drainage Basin, Arts. 5 and 6; 1982 Montreal Rules of International Law Applicable to Transfrontier Pollution, Arts. 5-7; 1984 Draft Rules on Legal Aspects of Long-Distance Air Pollution (Arts. 5-8); 1986 ILA Rules on the Law of International Groundwater Resources, Art. 3(2).

(180) *Inter alia* 1971 Ramsar Convention, Art. 5; 1974 Nordic Convention on the Protection of the Environment, underlying principle; 1979 ECE Transboundary Air Pollution Convention, Arts. 3-5; 1982 UNCLOS, Art. 142(2); 1985 ASEAN Agreement on the Conservation of Nature, Art. 20; 1991 ECE Convention on Environmental Impact Assessment, Arts. 3 and 5; 1992 ECE Industrial Accidents Convention, Arts. 4, 10 and 15; 1992 ECE Watercourses Convention, Arts. 6 and 10; 1997 UN Convention on the Non-Navigational Uses of International Watercourses, Arts. 8-19. See also 1986 WCED-EG Legal Principles for Environmental Protection and Development, Arts. 15 and 17; ILC Draft Articles on International Liability (1988, Arts. 10-12; 1996, Arts. 11, 13, 14, 17, 18).

(181) Birnie & Boyle, 108; Dupuy, ‘Soft Law and the International Law of the Environment’, 12 *Michigan JIL* (1991), 420, at 425-426; Partan, Duty to Inform in International Environmental Law, at 72 *et sequ.* See *contra*: Gündling, *supra* n. 160, at 82; Wolfrum, ‘Purposes and Principles of International Environmental Law’, 33 *German YbIL* (1990), 308, at 313 *et sequ.*

(182) See for instance Handl, *supra* n. 160.

(183) As Kirgis puts it, «consultation means something more than notification, but less than consent»; *Prior Consultation in International Law*, *supra* n. 160, at 11.

which is not yet available; it can at most be expected to deliver data which remain scientifically uncertain⁽¹⁸⁴⁾.

Information, and to some extent negotiation⁽¹⁸⁵⁾, are not exclusively a matter of State-to-State exchange; it implies information of the public, and *inter alia* of NGOs and private individuals, on products or activities which have, or might have, a substantial harmful impact on the environment. As extensively illustrated in the Chapter dealing with the principle pertaining to public participation, information and involvement of the public constitutes a key element of an efficient environmental strategy⁽¹⁸⁶⁾.

(184) Whilst under prevention, 'informational' duties relate to 'objectively' likely harm. Nevertheless, most documents, and 1992 Rio Declaration on Environment and Development and 1992 Agenda 21 in the first place, require information and notification with respect to potentially harmful activities without expressly providing that the uncertain realisation of such harm or uncertain causality link between a product/activity and such harm do not constitute reasonable ground to postpone the information and notification; see for instance: 1992 Rio Declaration on Environment and Development, Princ. 18; 1992 ECE Watercourses Convention, Art. 10; 1992 Biodiversity Convention, Princ. 14(1)(d) and (e). None of the 'activities' (including 'informational activities') listed in 1992 Agenda 21 for each 'area of concern' (Sect. II) reflect a real sense of precaution; see for instance Paras. 9.28 (transboundary air pollution) and 16.40 (biotechnology).

(185) Information, notification and consultation are no longer necessarily linked at the State to non-state entity level. Indeed, while public information is sometimes expressed in mandatory terms directly in the international documents, consultation of the public is essentially called for in hortatory terms, if mentioned at all, hence left to the appreciation of the State concerned, according to the ordinary domestic rules in matter of consultation of public opinion; see for instance 1992 Rio Declaration on Environment and Development, Princ. 10; 1992 ECE Industrial Accidents Convention, Art. 9; 1990 Bangkok Ministerial Declaration on Sustainable Development, Para. 27; 1990 Bergen Ministerial Declaration on Sustainable Development, Princ. V.

(186) The importance of popular participation and the role of NGOs in this respect, to stimulate environmental awareness, was raised at 1972 Stockholm Conference on the Human Environment, and has since been recurrently underlined; see 1972 Stockholm Declaration on the Human Environment, Princ. 19, and 1972 Programme of Action for Human Environment, Recommend. 97; 1987 Environmental Perspective to the Year 2000 and Beyond, Paras. 105-120; 1990 ECE Code of Conduct on Accidental Pollution of Transboundary Inland Waters, Princ. VII(1) and VII(2); 1991 ECE Convention on Environmental Impact Assessment, Art. 3(8); 1991 Antarctic Treaty Environmental Protocol, Annex I: Arts. 3(3) and 3(4); 1992 Agenda 21, Paras. 19.8 and 19.50(c); 1992 Convention on Transboundary Effects of Industrial Accidents, Art. 9 and Annex VIII; 1992 ECE Watercourses Convention, Art. 16; 1996 ILC Draft Articles on International Liability, Art. 15. For an extremely well informed account of the implications in chain and dramatic consequences of the lack of information of people by public authorities after Chernobyl accident, see Yarochinskaya, *Tchernobyl Vérité Interdite* (Transl. from Russian by Kahn) (Artel-Edn de L'Aube, 1993).

In the process running to the 1992 Conference on Environment and Development, the importance of a due consultation of local NGOs had particularly been stressed by WCED, which pointed that those organisations are usually better informed of the environmental needs and limits, than Governments are themselves. The commission equally underlined the importance of an on-going dialogue with industries and scientific community; *Our Common Future*, *op.cit.*, at 326; see also 1986 WCED-EG Legal Principles for Environmental Protection and Development, Art. 6. WCED's recommendations are duly reflected in 1992 Agenda 21, which attributes particular importance to public participation in general, and of certain groups in particular; see 1992 Agenda 21, Section III: Strengthen the Role of Major Groups, and systematic reference with respect to each 'area of concern' (e.g.: Paras. 17.6, management of marine and coastal areas; 18.12, freshwater resource management); see also 1992 Rio Declaration on Environment and Development, Princ. 10; 1992 Climate Change Convention, Art. 6. The importance of public awareness and involvement is also reflected in the various regional declarations adopted at the regional preparatory meetings to Rio; see for instance 1990 Bangkok Ministerial Declaration on

(continued)

iii. Prior Environmental Impact Assessment

The importance of a comprehensive study of the impact of certain activities or products on the environment was already acknowledged by the Arbitral Tribunal in the *Trail Smelter* case⁽¹⁸⁷⁾. The US was first to endorse the environmental impact assessment (statement) procedure as a key component of environmental planning and decision-making process; the National Environmental Policy Act of 1969 makes it a formal prior requirement to any major federal actions that might significantly affect the quality of the environment⁽¹⁸⁸⁾. The concept of prior environmental impact study however, has really emerged both at national⁽¹⁸⁹⁾ and international level in the aftermath of the 1972 Stockholm Conference on the Human Environment⁽¹⁹⁰⁾.

Early prior-impact-assessment clauses in international documents have remained essentially generic clauses of style, with no definition of the actual content and practical

Sustainable Development, Para. 27; 1990 Bergen Ministerial Declaration on Sustainable Development, Princ. V and Joint Agenda for Action, Para. 5; 1990 Bangkok Ministerial Declaration on Sustainable Development, Para. 27. However, between the general acknowledgement of the necessity to inform public, and the recognition of a right of the public to have access to environmental information, there is a step which States are not ready to take yet; see *infra* Chap. 6/3/i. Use of Human Rights Mechanisms to Preserve Individual Environmental Interests.

(187) The decision of the Tribunal in that case had to be postponed for 3 years, to allow for the collection of sufficient data on the environmental impact of Trail Smelter's activities.

(188) 1969 NEPA, 42 USC §§4321-4370; on the environmental impact assessment in the NEPA, see generally Gilpin, *Environmental Impact Assessment, Cutting Edge for the Twenty-First Century* (Cambridge University Press, 1995), at 3; Goldie, 'A General View of International Environmental Law. A survey of Capabilities, Trends and Limits', in Kiss (ed.), *La Protection de l'environnement et le droit international/The Protection of Environment and International Law*, Académie de Droit International de La Haye, Colloque 1973 (Sijthoff, 1975), 25, at 124 *et sequ.*; see also Wirth, 'International Technology Transfer and Environmental Impact Assessment', in Handl & Lutz (eds.), *Transferring Hazardous Technologies and Substances, The International Legal Challenge* (Graham & Trotman, 1989), Chap. 4.

(189) A number of States introduced a formal requirement of environmental impact assessment in their environmental policy in the 1970s (Hong Kong, Japan and Singapore, in 1972; Canada, 1973; Australia, 1974; Germany, 1975; France, 1976; the Philippines, 1977; Taiwan, 1979. The majority of European States however introduced the environmental impact assessment procedure in the mid 1980s, to comply with 1985 Directive 85/337/EEC; see Gilpin, *Environmental Impact Assessment, Cutting Edge for the 21st Century*, *supra* Also Roe, Dalal-Clayton & Hughes, *A Directory of Impact Assessment Guidelines* (IIED/WRI/IUCN for OECD DAC, 1995), at 6-7.

(190) Although no express reference is made to environmental impact assessment in the 1972 Stockholm Declaration on the Human Environment; such reference was contained in the controversial draft Princ. 20 which was finally abandoned; see *supra* ii. Prior Information, Notification and Consultation. 1972 Stockholm Action Plan for the Human Environment contains several references to prior environmental impact assessment, see Recommend. 51, water uses management; Recommend. 55, effects of water management upon oceans; Recommend. 70, activities likely to have an impact on climate; Recommend. 74, pollution control. However, by-en-large, the Action Plan provides for the general impact assessment of on-going activities (for instance Recommend. 21, ecological effects of pesticides) or inventories of endangered species (Recommend. 40), without trying to use such assessments or inventories as planning tools.

implications of such impact studies. The 1978 UNEP Draft Principles on Shared Natural Resources thus reads:

«States *should* make environmental assessments before engaging in any activity with respect to shared natural resources which *may* create risks of significantly affecting the environment of another State or States sharing that resource.»⁽¹⁹¹⁾

(191) Princ. 4 (emphasis added); see also OECD Recommend. C(74)216, on Analysis of the Environmental Consequences of Significant Public and Private Projects; OECD Recommend. C(79)116, on the Assessment of Projects with Significant Impact on the Environment. A more mandatory language was adopted in the non-binding 1982 World Charter for Nature, requiring 'an exhaustive examination' for those activities likely to pose a significant risk, which demonstrate that «the expected benefits outweigh potential damage to nature», Art. 11(b); the Charter also provides for environmental impact studies sufficiently in advance with respect to activities that *may disturb* the environment, Art. 11(c). Hortatory prior-impact-assessment clauses abound in treaty law, *inter alia* 1974 Nordic Convention on the Protection of the Environment, Art. 6; 1982 UNCLOS, Art. 206, provides for EIA «when reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment»; the 1994 UNCLOS Agreement Relating to the Implementation of Part XI also provides for impact studies to be made in accordance with the rules and guidelines set by the Authority; Annex, Sect. 1, Para. 7; 1985 ASEAN Agreement on the Conservation of the Nature, Art. 14(1). See also UNEP Regional Seas Conventions; 1976 Barcelona Protocol on Dumping in Mediterranean Sea, Annex III; 1981 Abidjan Convention on the Marine Environment in West and Central Africa, Art. 13; 1981 Lima Convention on the Marine Environment in the South-East Pacific, Art. 8; 1982 Jeddah Convention for the Conservation of the Red Sea and Gulf of Aden Environment, Art. XI; 1983 Cartagena Convention on the Marine Environment in the Wider Caribbean Region, Art. 12; 1985 Nairobi Convention on the Marine Environment in East Africa, Art. 13; 1986 Noumea Convention on the Environment in the South Pacific, Art. 16. The same is true of 1978 Kuwait Convention on the Marine Environment in the Arabian Gulf, Art. XI, although the action plan appended to the Convention, For the Protection and Development of the Marine Environment and the Coastal Areas, sets some guidelines for co-ordinated regional environmental assessment programmes; the action plan is reproduced in 17 *ILM* (1978), 501, see Chap. I.

The prior-impact-assessment clause is a clause of style common to most recent documents (although substantial guidelines have now been made available through 1991 ECE Convention on Environmental Impact Assessment, *infra* p. 166), *inter alia*: 1992 Rio Declaration on Environment and Development, Princ. 17; 1992 Biodiversity Convention, Art. 14(1)(a) and (b), 1992 Forestry Principles, Princ. 8(h); 1992 Baltic Sea Convention, Art. 7; 1990 Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Art. 13; 1990 Bergen Ministerial Declaration on Sustainable Development, Para. 16(f); ILC 1996 Draft Articles on International Liability, Art. 10. Prior impact assessment is also called for, but not further defined, in the context of most of 1992 Agenda 21 special areas of concern, Section II: protection of the atmosphere (Para. 9.12(b)); deforestation (Para. 11.24(a)); fragile ecosystems (Para. 13.17(a)); preservation of biodiversity (Para. 15.5(k)) and sound management of biotechnology (Para. 16.45(c)); protection of seas and Oceans (Para. 17.5(d)); management of freshwater resources (Para. 18.22(c)); and sustainable management of toxic chemicals (Para. 19.21(d)), solid wastes (Para. 21.31(a)) and radioactive wastes (Para. 22.4(d)); see some other references in Sands & Bulatao, *International Procedural Aspects of Atmospheric Protection: Environmental Impact Assessment and Access to Information*, CIEL Background Papers on International Environmental Law No. 2/1991 (Center for International Law, School of Law, King's College London, 1991), at 5 *et sequ.* See also EC Directives on genetically modified micro-organisms: Directive 90/219/EEC, on the contained use of genetically modified micro-organisms, [1990] OJ L117/1 (Arts. 7-12), and Directive 90/220/EEC, on the deliberate release into the environment of genetically modified organisms, [1990] OJ L117/15 (Arts. 1-12).

The duty to perform an environmental impact assessment prior to nuclear testing, grounded both in treaty (in that case 1986 Noumea Convention on the Environment in the South Pacific, Art. 16) and customary international law 'derived from widespread international practice', constituted a major argument invoked by New Zealand in its Request for an Examination of the Situation on the French nuclear tests in Mururoa and Fangataufa; *Request for an Examination of the Situation in Accordance with Paragraph 63 (continued)*

The nature and extent of such assessment were the object of a more comprehensive elaboration in the mid 1980s, with the adoption of the 1985 EEC Directive on the assessment of the effects of certain public and private projects on the environment⁽¹⁹²⁾, the 1987 UNEP Goals and Principles of Environmental Impact Assessment⁽¹⁹³⁾ and with the negotiations of the 1991 Espoo Convention on Environmental Impact Assessment⁽¹⁹⁴⁾.

Environmental impact study can be defined in a more 'economic' perspective as «a generic term that embraces both an administrative process and a set of analytical techniques designed to predict and appraise environmental impacts of (...) proposals (...) put forward by the private and public sector»⁽¹⁹⁵⁾; it consists in fact in a *procedure* ⁽¹⁹⁶⁾ the purpose of which is:

«[T]o identify, describe and assess in an appropriate manner, in the light of each individual case (...) the direct and indirect effects of a project on the following factors:

- human beings, fauna and flora;
- soil, water, air, climate and the landscape;
- material assets and the cultural heritage;
- the interaction between the factors mentioned in the first and second indents.»⁽¹⁹⁷⁾

*of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case, ICJ Rep. 1995, 288, Para. 5; yet only Judge Palmer adopted the view that the duty to perform an environmental impact assessment «where activities may have a significant effect on the environment» constituted a principle of customary law related to the environment; ICJ Rep. 1995, *ibid.*, (diss.op.) at Para. 91. Similar argument was put forward in the *Danielsson* case *supra* n. 65, Para. 45.*

⁽¹⁹²⁾ Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, [1985] OJ L175/40, as amended by Council Directive 97/11/EC, [1997] OJ L73/5.

⁽¹⁹³⁾ UNEP Governing Council Decision 14/25, 14 June 1987, reproduced in 17 *EPL* (1987), 36, commented by Bonine, 'Environmental Impact Assessment - Principles Developed', 17 *EPL* (1987), 5.

⁽¹⁹⁴⁾ See also 1988 CRAMRA, Art. 4, although this provision is superseded by 1991 Antarctic Treaty Environmental Protocol, Annex I, due to French and Australian persistent opposition to CRAMRA preventing it from entering into force; 1992 ECE Industrial Accidents Convention, Annex V.

⁽¹⁹⁵⁾ James, *The Application of Economic Techniques in Environmental Impact Assessment* (Kluwer Academic Publishers, 1994), at 1.

⁽¹⁹⁶⁾ Or process; Sands, *Principles* (Vol. I), Chap. 15.

⁽¹⁹⁷⁾ Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment (as amended), Art. 3; the European Court of Justice interpreted Art. 3 of the Directive as a prescription of the content of the assessment and the factors to be taken into account; EEC Case C-431/92, *Commission v. FRG (Grosskrotzenburg case)*, [1995] *ECR* I-2189, §§ 39-40. In the same case, the Court held that Art. 2 of the Directive, which requires environmental impact assessment for the projects likely to have a significant impact on the environment, lays down an unequivocal obligation incumbent on the competent authority in each States for approval of projects to make certain projects subject to an assessment of their effects; *ibid.* The Court subsequently confirmed its approach; see EC Case C-133/94, *Commission v. Belgium*, 2 May 1996, reproduced in 5 *EELR* (1996), 216. The European Court of Justice also recognised the direct effect of the directive, hence susceptible of being invoked directly by individuals against a State; EC Case C-72/95, *Aannemersbedrijf P.K. Kraaijeveld BV et al. v. Gedeputeerde Staten van Zuid-Holland*, 1996, §§ 56-59; for a review of the recent case-law related to 1985 EC Directive on Environmental Impact Assessment, see Garcia Ureta, 'The E.C. Environmental
(continued)

The term of environmental impact is understood *largo sensu* to encompass not only the direct effects on biological resources, but also the social and economic impact thereof⁽¹⁹⁸⁾. Without going into too many details, the environmental impact assessment procedure can be schematically presented as a seven-stage process⁽¹⁹⁹⁾:

(1) In a preliminary stage, the proposed activity is described and the actors involved and the relevant legal framework identified. (2) The environmental impact of the proposed activity is then anticipated, and (3) a baseline study made, which describes the existing environment before the contemplated activity. (4) The impact is quantified as precisely as possible; a degree of uncertainty remains, which is inherent in any evaluation based on predictions rather than on actual evidence. (5) The measures contemplated to mitigate the environmental impact are listed and priced, and (6) the envisaged activity is compared and assessed in terms of environmental and financial costs and benefits with the possible alternatives, including the no-action alternative. (7) Where necessary, further documentation is provided to allow a full impact assessment. Whole or part of the outcome of such impact studies is communicated to the potentially affected State(s) as part of the 'relevant and reasonably accessible information' to be notified⁽²⁰⁰⁾. Environmental impact assessment studies constitute the ground basis in the consultations held with the view of defining the appropriate measures of prevention and mitigation of the potential risk in relation to the proposed activity⁽²⁰¹⁾.

The impact assessment process remains an essentially domestic (or internal) procedure, conducted according to domestic rules, in the light of international minimum standards⁽²⁰²⁾, whereby the applicant planning a potentially environmentally

Impact Assessment Directive Before the European Court of Justice', 5 *Environmental Liability* (1997), 1.

(198) Ahmad & Sammy, *Guidelines to Environmental Impact Assessment in Developing Countries* (Hodder & Stoughton, 1985).

(199) Classification after Ahmad & Sammy, *Guidelines to Environmental Impact Assessment in Developing Countries*, *supra*; also Roe, Dalal-Clayton & Hughes, *A Directory of Impact Assessment Guidelines* (IIED/WRI/IUCN for OECD DAC, 1995).

(200) Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, (as amended), Art. 7; 1991 ECE Convention on Environmental Impact Assessment, Art. 5; 1991 Antarctic Treaty Environmental Protocol, Annex I, Arts. 3(3) and 3(4). In that latter case, information are to be passed on to *all* contracting parties.

(201) *Supra* ii. Prior Information, Notification and Consultation; Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment (as amended), *ibid.*; 1991 ECE Convention on Environmental Impact Assessment, *ibid.*; 1991 Antarctic Treaty Environmental Protocol, Annex I, Art. 4.

(202) 1985 EEC Directive on Environmental Impact Assessment, Art. 5 and Annex III; 1991 ECE Convention on Environmental Impact Assessment, Arts. 2(7) and 4(1) and Appendix II; 1991 Antarctic Treaty Environmental Protocol, Annex I, Art. 3. Even though 1992 ECE Industrial Accidents Convention cross refers to 1991 ECE Convention on Environmental Impact Assessment as applicable to define which activities are to be subjected to mandatory prior assessment, as well as the minima of such assessment, Art. 4(4), it also provides a complementary set of issues to be addressed in the analysis and
(continued)

hazardous⁽²⁰³⁾ or otherwise listed activity⁽²⁰⁴⁾ is required to demonstrate to the competent authority the harmlessness of the intended activity in the particular circumstances of the case in order to obtain the authorisation to proceed. Environmental impact assessment is exclusively contemplated in relation to concrete projects, or in relation to specific activities. It does not apply to general policy, plan or programme⁽²⁰⁵⁾.

The process of prior impact assessment is a common feature of both preventive and precautionary policy. The major difference between a preventive and precautionary impact assessment does not lie in the accuracy of the assessment, in any case based on predictions, neither does it pertain to the nature of the activity targeted, nor to the nature of the risk to be averted. It relates, once more, to the degree of certainty of the causality link between the activity envisaged and the risk to be avoided. From the

evaluation process, Annex V.

(203) Environmental impact assessment is to be integrated in the preparation and planning of an activity, and does obviously not relate to emergency situation or otherwise unplanned activities. It has to be mentioned here that the concept of prior impact assessment has extended well beyond substantially hazardous activities or projects in a transboundary context, and has become an important tool of development policy, whereby the environmental and social impact of development projects is thoroughly evaluated before being launched or funded. Prior impact assessment for development projects was already envisaged, albeit in a very elusive way, in 1972 Stockholm Action Plan for the Human Environment (Recommend. 63, broadening of criteria for development projects analysis, to encompass environmental considerations), and more clearly in 1982 World Charter for Nature, Para. 11(c). OECD Members have agreed, in principle, to ensure that «development assistance projects and programmes, which because of their nature, size and/or location, could significantly affect the environment, should be assessed at as early a stage as possible and to an appropriate degree from an environmental standpoint»; OECD Recommend. C(85)104, on Environmental Assessment of Development Assistance Projects and Programmes; see also OECD Recommend. C(86)26 (final), On Measures Required to Facilitate the Environmental Assessment of Development Assistance Projects and Programmes. A set of guidelines was drafted by OECD DAC, to ensure due consideration for all environmental aspects in domestic environmental impact assessment procedures and internal procedure of multilateral development assistance institutions; see OECD Recommend. C(89)2 Concerning an Environmental Checklist for Development Assistance; (Annex 1, more particularly section I). See also OECD DAC *Guidelines on Environment and Aid* (OECD/OCDE, 1992), endorsed by OECD Ministers of Environment and Development Cooperation, 3 December 1991, OECD/GD(91)200.

The World Bank has also integrated environmental impact assessment to assess its own investment lending operations; see 1989 Operational Directive 4.00, Annex A: Environmental Assessment. 1992 Agenda 21 also refers to prior impact assessment in the context of development of human settlements infrastructure (Para. 7.41(b)) and the general development and environment integrated decision-making process (Para. 8.4). 1992 Agenda 21 provides for environmental impact assessment for development project (Para. 8.5) and industrial development in general (Para. 9.18).

(204) *Infra* note 191.

(205) Extension of environmental impact assessment to the level of policy, plan and programme was contemplated at the drafting stage of 1985 EEC Directive on Environmental Impact Assessment, but was finally abandoned. A draft proposal to amend the directive in that sense was submitted again by the European Commission in 1992, as part of a general revision of the Directive, but was not retained in the Council Directive 97/11/EC, [1997] OJ L73/5 amending Directive 85/337/EEC, which is still focused on projects; see Art. 6(1); Cerny & Sheate, 'Strategic Environmental Assessment in the European Community: Amending the EA Directive', 22 *EPL* (1992), 154; Sheate, 'Amending the EC Directive (85/337/EEC) on Environmental Impact Assessment', 2 *Environmental Law Network International Newsletter* (1994), 17.

perspective of pure prevention, prior impact assessment is requested essentially for those activities or projects (objectively) likely to incur serious impact on the environment⁽²⁰⁶⁾. From a perspective of precaution, environmental impact assessment can be required⁽²⁰⁷⁾ for those activities which are presumed to have substantial harm, or might cause substantial harm, even if the link between the intended activity and the predicted impact is not definitely established by clear and convincing evidence⁽²⁰⁸⁾.

5. Limits Inherent in the Precautionary Principle

It is stating the obvious that precaution does not require complete and absolute eradication of all substantial environmental risks, nor impose universal and absolute standards. There are maximum limits beyond which pollution irreversibly affects the environment, and minimum limits below which environmental measures are obviously excessive. Those are the upper and lower limits in-between which the natural environment can survive the human impact. And there are self-evident constraints upon these limits, flowing both from financial and technological availability, and from the

(206) See documents listed at note 191.

(207) In practice, most recent documents endorsing the precautionary principle still provide for an environmental impact assessment procedure with respect to activities likely to incur transboundary harm and do not expressly state that the lack of conclusive evidence of a link between activity and harm/risk shall not justify the postponing of such prior assessment; see documents referred to at note 121. Princ. 4; see also OECD Recommend. C(74)216, on Analysis ...).

(208) Thus, Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment (as amended), 1991 ECE Convention on Environmental Impact Assessment and 1991 Antarctic Treaty Environmental Protocol set a list of certain activities or projects for which there is a presumption of serious impacts (respectively: Annex I / Appendix I / Annex I) for which prior environmental impact assessment is mandatory (Arts. 4(1) / 2(2) and 2(3) / 8). Interestingly, none of the above mentioned documents contain any specific reference to the precautionary principle. It must be noted, against the distinction drawn here between a preventive and precautionary environmental impact assessment, that some authors held the requirements of environmental impact assessment defined in the 1985 EEC Directive as encompassing the principle of precaution; see Peters, 'The Significance of Environmental Precaution in the Environmental Impact Assessment Directive', 5 *EELR* (1996), 210, and references contained in that article. The wording of 1991 ECE Convention on Environmental Impact Assessment is ambiguous however, as it requests from States the establishment of an environmental impact assessment procedure «with respect to proposed activities listed in Appendix I that are likely to cause significant adverse transboundary harm...», but fails to state whether such harm is presumed for the activities in referred Appendix, or is still to be demonstrated on a case-by-case basis, as a condition to a prior impact assessment. Nonetheless, considering that above mentioned bracketed terms are used as an en-bloc expression throughout the Convention, and that the general criteria to assist in the determination of the environmental significance of activities (Appendix III) are expressly designated to help States with those activities *not listed* in Appendix I (and not those listed), it can be reasonably concluded the listed activities are likely to cause significant adverse transboundary harm and, therefore, require mandatory previous impact assessment.

See also 1992 ECE Industrial Accidents Convention, Art. 4(4), cross referring to «hazardous activity (...) subject to an environmental impact assessment in accordance with the Convention on Environmental Impact Assessment in a Transboundary Context...»). The 1988 CRAMRA sets environmental impact assessment as a condition to the resuming of the banned activities, that would demonstrate the harmlessness of the intended activity; Art. 4(2).

need to preserve certain incentives to perpetuate development and conservation of the environment.

i. Financial and Technical Limits

Precaution, and *a fortiori* prevention, impose a duty of diligent conduct upon States, but do not commit them to a specific result regardless of individual capacities and available means⁽²⁰⁹⁾. While precaution strives to bypass the limits of science and overcome its uncertainties, it cannot realistically claim to ignore the financial and technological limits.

Those limits and constraints strongly influenced States throughout the negotiations of recent international environmental instruments⁽²¹⁰⁾, and even more so with respect to the precautionary principle. Such limits are not only a matter of less developed States' reticence towards an extremely intrusive concept that might seriously undermine their own aspirations to development and industrialisation; it is also a matter of industrialised States and the industrial sector, eager to keep the minimum sacrifice necessary at minimum expenses⁽²¹¹⁾.

A precautionary approach can have far reaching consequences in terms of costs and technical means it involves. It implies the enactment of legislative and judicial measures to anticipate a potential, yet unproved, harm or risk, the renunciation of certain activities or products susceptible of causing substantial harm to the environment despite scientific uncertainty, and costly prior environmental impact assessment studies. Needless to say, not all countries are on an equal footing to prevent a risk from realising and to anticipate the occurrence of environmental harms. To accommodate the various positions and reservations of States, most environmental instruments entailing substantial technical or financial input tend to link the duty to take preventive/precautionary measures with a reasonable-measure⁽²¹²⁾ or an effective-

(209) *Supra* 4/i. Unilateral Duty of Due Diligence.

(210) See *infra* Chap. 5, Principle of Partnership.

(211) The lengthy debate concerning the North Sea, as well as discussion a Bergen Ministerial Conference are very illustrative of this tendency (*supra*). Very illustrative too, is the attitude of the major CFCs producer countries, *inter alia* UK, Italy and France, at the ozone layer Convention and Protocol negotiations. Such tendency also prevails at the domestic level, where best practical means environmental-legislation are commonplace. In Britain, early best-practical-means legislation was passed in the context of air pollution (Alkali Act, 1874), and was later to become the rule for the control of noxious and offensive emissions for each individual medium; see further: Ball & Bell, *Environmental Law* 4th edn (Blackstone, 1997), 285 and 323.

(212) Preventive measures were often interpreted as implying *all reasonable measures* to protect/prevent...; see for instance 1969 Civil Liability Convention, Art. 1(7); 1991 Antarctic Treaty Environmental Protocol, Annex IV, Arts. 3(2), 5(5).

measure clause⁽²¹³⁾, or with similar clauses calling for appropriate measures⁽²¹⁴⁾, all necessary/requisite measures⁽²¹⁵⁾, all possible steps⁽²¹⁶⁾, or measures according to capabilities⁽²¹⁷⁾. Some documents simply omit to qualify the measures to be taken⁽²¹⁸⁾, whilst other resort to more compelling clauses that combine scientific criteria with a certain discretion, such as best available means and best practicable steps⁽²¹⁹⁾, best available technologies⁽²²⁰⁾, or best available technologies not entailing excessive costs⁽²²¹⁾.

(213) See for instance 1968 African Convention on Nature, Art. IV; 1972 London Convention on Prevention of Marine Pollution, Art. II; 1972 World Heritage Convention, Art. 5; 1988 Sofia Protocol to the 1979 ECE Transboundary Air Pollution Convention, concerning the Control of Emissions of Nitrogen Oxides, Art. 2(1).

(214) See 1972 World Heritage Convention, Art. 5(d); 1979 Bonn Convention on Conservation of Migratory Species, Art. III; 1979 Bern Convention on the Conservation of European Wildlife, Arts. 4-7; 1985 Vienna Convention on the Ozone Layer, Art. 2(1); 1990 ECE Code of Conduct on Accidental Pollution of Transboundary Inland Waters, Sect. II, Art. 1; 1992 ECE Watercourses Convention, Arts. 2 and 3(1)(f) and (g); 1992 Forestry Principles, Princ. 2(b) and 8(a); 1992 Biodiversity Convention, Arts. 7-11; 1997 UN Convention on the Non-Navigational Uses of International Watercourses, Arts 7 and 27. All but one ILC Draft Articles on Liability for Injurious Consequences of Acts Not Prohibited by International Law refer to appropriate measures, Draft Art. 1989, 1990: Art. 8; Draft Art. 1996, Art. 4; Draft Articles 1988 referred to *reasonable preventive measures*, Art. 9; vain attempts had been made to insert a *best available technology* clause (1992 *YbILC* Vol. II Pt. 1, 68).

(215) 1968 African Convention on Nature, Art. VI; 1979 Bern Convention on the Conservation of European Wildlife, Art. 2; 1982 UNCLOS, Art. 194; 1985 ASEAN Agreement on the Conservation of Nature, Arts. 1 and 2.

(216) 1972 Oslo Convention on Marine Pollution from Ships and Aircraft, Art. 1; 1974 Paris Convention on Marine Pollution from Land-Based Sources, Art. 2(1)(a); 1992 OSPAR Marine Environment Convention, Arts. 3-5.

(217) UNEP Regional Seas Conventions, *supra*; 1992 Rio Declaration on Environment and Development, Princ. 15; 1992 Climate Change Convention, Art. 3(1); 1992 Biodiversity Convention, Art. 6. 1992 Agenda 21 constantly qualifies suggested measures and duties concerning the special areas of concern (Section II) with the expression «according to [State] capacities and available resources».

(218) 1958 Convention on the High Seas, Art. 25; 1958 High Seas Conservation Convention, Art. 2.

(219) 1972 Stockholm Action Plan for the Human Environment, Recommend. 71, reduction of the release of dangerous substances in the environment; most of UNEP Regional Seas Conventions contains a provision which refers to the best practical means, in accordance with States capabilities: 1976 Barcelona Convention on Mediterranean Sea, Art. 4(1); 1981 Abidjan Convention on the Marine Environment in West and Central Africa, Art. 4(1); 1983 Cartagena Convention on the Marine Environment in the Wider Caribbean Region, Art. 4(1); 1985 Nairobi Convention on the Marine Environment in East Africa, Art. 4(1); and 1986 Noumea Convention on the Environment in the South Pacific, Art. 5(1); see also 1972 London Convention on the Prevention of Marine Pollution, Art. I; 1989 Basel Convention on Transboundary Movement of Hazardous Wastes, Arts. 4(4), 4(9), 10(2)(c); 1991 Bamako Convention on Transboundary Movement of Hazardous Wastes, Arts. 1(10) and 4(1), (2), and (3)(n); 1991 Antarctic Treaty Environmental Protocol, Annex III (wastes production and disposal); 1992 ECE Industrial Accidents Convention, Arts. 3(1), 6, and 8.

(220) 1972 Stockholm Action Plan for the Human Environment (Recommend. 53, appropriate technologies in water resources management); 1979 ECE Transboundary Air Pollution Convention (Art. 6); 1982 World Charter for Nature (Para. 11); PARCOM Recommend. 89/2, to Use Best Available Technologies, and PARCOM Recommend. 90/1, on the Definition of the of the Best Available Technology for Secondary Iron and Steel Plants; 1991 ECE Convention on Environmental Impact Assessment, Art. 2(1); 1992 ECE Industrial Accidents Convention, Annex IV, Para. 6; 1992 ECE Watercourses Convention, Art. 3(2); 1992 OSPAR Marine Environment Convention, Annex I, Art. 1(1) (continued)

What constitute appropriate, reasonable, effective or best available, practicable measures have remained undefined and therefore a matter for States' appreciation⁽²²²⁾. By contrast, the terms of best available technologies are more concisely construed, and are clarified further with the elaboration of various of criteria to be taken into consideration, pertaining among others to the actual availability of a technique and to its economic viability. The 1992 ECE Watercourses Convention, Annex I, suggests the following definition of best available technology:

«1. The term "best available technology" is taken to mean the latest stage of development of processes, facilities or methods of operation which indicate the practicable suitability or a particular measure for limiting discharges, emissions and waste. In determining whether a set of processes, facilities and methods of operation constitute the best available technology in general or individual cases, special consideration is to be given to:

- (a) Comparable processes, facilities or methods of operation which have recently been successfully tried out;
- (b) Technological advances and changes in scientific knowledge and understanding;
- (c) The Economic viability of such technology;
- (d) Time limits for installation in both new and existing plants;
- (e) The nature and volume of the discharge and effluents concerned;
- (f) Low- and non-waste technology.

2. It therefore follows that what is "best available technology" for a particular process will change with time in the light of technological advances, economic and social factors, as well as in the light of changes in scientific knowledge and understanding.»⁽²²³⁾

Some scholars, on the contrary, have made it clear that *best* does not mean the *latest* available technology or sophisticated equipment, but relates rather to «the *effectiveness* of the techniques in minimising, preventing or rendering harmless noxious emissions.

and Annex III, Art. 2(1); 1992 Baltic Sea Convention, Art. 3; 1997 Esbjerg Ministerial Declaration on the North Sea, Para. 212.

(221) The concept was originated in the Directive 84/360/EEC on the Combating of Air Pollution from Industrial Plants ([1984] OJ L188/20). See also 1992 Climate Change Convention, Art. 3(3), and 1992 Rio Declaration on Environment and Development, Princ. 15, refer to cost-effective measures.

The best available technique not entailing excessive cost was also endorsed at national level, most notably Britain (see Environmental Protection Act 1990 (Sect. 7)) and Ireland; see further: Ball & Bell, *ibid. supra* n. 211, at 308 *et sequ.*

(222) See for instance a BPM Note of the British Industrial Air Pollution Inspectorate, defines 'practicable', in the expression of Best Practicable Means as used in the Clean Air Act 1956, as 'reasonably practicable, having regard, amongst other things, to local conditions and circumstances, to the financial implications and to the current state of technical knowledge'; Industrial Air Pollution Inspectorate, *Best Practicable Means: General Principles and Practice*, BPM Note 1 (Health & Safety Executive, 1984).

(223) 1992 OSPAR Marine Environment Convention states a similar definition; Appendix 1. So does the 1992 Baltic Sea Convention, Annex II, Regul.3, and PARCOM Recommend. 89/2, on the Use of Best Available Technologies, although reference is made to the economic feasibility rather than viability of the measures.

“Best” is not an absolute term and it has been indicated that there may well be a number of different techniques which qualify under this particular word»(224).

Best is thus essentially relative and variable both in space and time(225).

«There will be changes in scientific knowledge and in the means of avoiding or reducing hazards to the environment. There will be also shifts in Popular Perceptions. Old fears may prove groundless, or new concerns arise...»(226)

The ‘economic viability’ aspect of the best available technology was further emphasised with the idea of *best available technology not entailing excessive cost*. The concept represented the key element of European Council Directive 84/360 on the Combating of Air Pollution from Industrial Plants; a technical note referring to the directive states:

«BAT is to be interpreted as the technology (or set of technologies) which operating experience has adequately demonstrated to be the best technology commercially available as regards the minimisation of emissions to atmosphere, providing it has proven to be economically viable when applied to the industrial sector concerned.»(227)

The best available technology not entailing excessive or disproportionate costs is, accordingly, determined on the basis of a cost-benefit analysis, and ought to represent a balanced solution in terms of both the financial costs incurred(228), and the resulting

(224) Ball & Bell, *ibid. supra* n. 211, at 309 (emphasis added). It was clearly stated in the context of the negotiations on a World Charter for Nature, that best did not necessarily mean most sophisticated and advanced technologies, in response to the arguments put forward by some developing States, that any reference to best appropriate means would remain non practicable considering their lack of technologies at all (India); Amazonian countries expressed their fear of an infinite dependence on more advanced countries for such technologies; Burhenne & Irwin, *The World Charter for Nature*, Beiträge Zur Umweltgestaltung Vol. A90/Erich, 2nd edn, (Schmidt Verlag, 1986), 64 *et sequ.*

(225) The 1990 Adjustments and Amendments to Montreal Protocol on the Ozone Layer -enacted less than three years after the signing of the Montreal Protocol- and the 1992 Adjustments and Amendment constitute an example of adaptation of regulatory action to evolving scientific knowledge. Scientific data have shown indeed that (a) the time schedule of phasing out key ozone-depleting substances had to be tightened, and that (b) the range of controlled substances had to be expanded; see Handl, ‘International Efforts to Protect the Global Atmosphere: a Case of Too Little, Too Late?’, 1 *EJIL* (1990), 250. Likewise, the 1974 Baltic Sea Convention had to be reviewed in the light of the evolution of the knowledge concerning the environment (as well as the political changes in the region); the 1992 Baltic Sea Convention hence (a) aims at a total eradication of pollution (as opposed to a mere reduction in the 1974 Baltic Sea Convention), (b) endorses a precautionary approach (as opposed to prevention), and (c) targets a wider circle of riparian and non riparian States; see Kiss & Shelton, *Traité de Droit Européen*, 320.

(226) British Royal Commission on Environmental Pollution, *Twelfth Report: Best Practicable Environmental Option* (HMSO, 1988), Para. 2.9 (hereafter referred after the title).

(227) Zierock (ed.), *Technical Note on Best Available Technologies Not Entailing Excessive Costs* (European Commission, 1991), at 1 (emphasis as in original).

(228) Apart from the costs generated by the implementation of such approach the alternative solution to an activity or product rejected under such principles frequently generates either a reduction of the potential economic productivity (*lucrum cessans*, mainly imposed by the lower limit) or additional costs (*continued*)

environmental benefits; the weight to be attributed to each of these two factors, however, remains uncertain⁽²²⁹⁾.

ii. Preservation of Incentives

To contribute to rather than hamper development, the principle of precaution is to be construed in a way that would preserve incentives. In the words of the then U.N. Secretary General: «[w]hile ensuring the preservation of natural resources implies certain limitations, it also provides many valuable incentives and opportunities for new thinking»⁽²³⁰⁾.

A precautionary approach cannot, realistically, be an 'all-or-nothing' deal, obeying the 'zero-harm rule'⁽²³¹⁾. An impact of human activities on both the sink and source functions of the ecosystem is unavoidable; human beings live on the natural resources, and to try to annihilate all adverse environmental effects is unacceptable, not affordable and, in fact, undesirable. Not only would an ultra-cautious approach suppress all incentives to develop further, both economically and technologically; it would also neglect the essential function of the ecosystem, that is its assimilative capacity⁽²³²⁾. Finally, it was appropriately underlined that precaution should enter international law

(*damnum emergens*, mainly raised by the upper limit).

(229) Ball & Bell, *ibid. supra* n. 211, at 310. Hence, the BPM Note of the British Industrial Air Pollution Inspectorate offer the following guidance: «[t]he words 'financial implications' can relate both to the direct capital and to the revenue costs borne by the operator of the process. In deciding whether such costs of prevention are practicable in any given circumstances the aim is to achieve a reasonable balance between the costs of prevention and/or dispersion and the benefits».

(230) UNSG Agenda for development (1994), Para. 74.

(231) Bodansky, 'The Precautionary Principle in US Environmental Law', in O'Riordan & Cameron, Chap. 12.

(232) As rightly pointed out by Stebbing, «[m]arine populations have recovered from many natural disasters (...), which has been as great or greater than those mortalities resulting from human activities. Toxic material antedated man on this planet and predated biological system with a capacity to resist toxic stress. The point here is that we must not become too protectionist. While we must refine our capacity to identify and control quickly new synthetic compounds which are toxic at low concentrations, we should not consider the 'zero discharge' option as necessary even if it were attainable and affordable»; Stebbing, 'Environmental Capacity and the Precautionary Principle', 24 *MPBull.* (1992) 287, at 291, 2nd col. Although made in the very different context of a zero nuclear risk, the remarks made by the Professor Funk-Brentano are to a certain extent also applicable to the zero environmental impact ideal. Such a no risk ideal, he argues, is both absurd because inaccessible, and unreasonable because unnecessary. The radicalisation of the pollution norms by virtue of precaution would not only be financially excessively costly, but it might also cost their credibility to scientific experts as well as dishearten research of new techniques and solutions to environmental challenges; «[l]es conséquences qui découlent d'une application abusive du «*principe de précaution*» révèlent notre difficulté à prendre une décision raisonnable dans un contexte d'incertitude. Elles nous invitent à éviter des décisions hâtives qui risqueraient de nous faire dépenser de l'argent inutilement et de freiner le développement d'innovations qui sont le meilleur garant de l'amélioration de nos conditions de vie»; *Le Monde*, Oct. 29/30, 1995, 13. See also: British Royal Commission on Environmental Pollution, *Twelfth Report: Best Practicable Environmental Option*, Para. 2.29; Cameron & Wade-Gery, *Addressing Uncertainty*, 9.

'by stealth, not by force; by supportive adjustment, not by brazen entry; by enlightened self-interest, not by magisterial command'(233).

Precaution, in fact, is about a proper balancing of the risks and a clear definition of thresholds. As a principle of international environmental law, precaution assumes two major roles:

- (a) a balancing role, to distinguish the risks which are objectively and reasonably acceptable, from those which are excessive both in terms of their magnitude and the probability of their occurrence;
- (b) a constructive role, to identify the feasible alternatives to those activities entailing unreasonable risks, bearing in mind that, by-and-large, no alternative is deemed acceptable to States, to the private sectors and to some extent to the public, unless it is not only economically *viable*, but indeed *profitable* in a foreseeable term(234).

In that perspective, the concept of best environmental option has emerged increasingly linked to precaution and prevention(235). Whilst the various international

(233) O'Riordan, *Interpreting the Precautionary Principle*, 8.

(234) The questioning of the Canadian Ocean Dumping Control Act (since 1988, incorporated into the Canadian Environmental Protection Act, Part VI) setting an all-ban on the dumping of *any* substance at sea, *pollutant or not* except in accordance with the terms and conditions of a permit, is one example of the controversy raised by an overcautious legislation, *inter alia* the lack of concrete link between the proscribed conduct and the actual or potential harm to the environment. The concept of precaution underpins the ban, albeit the term of precaution is not actually used in the contested act. In that particular case however, no decision was made regarding the legality of the total ban. Rather, the Court confined their review to the alleged *ultra vires* character of the Act, and decided that, although the Act would fall outside the ordinary constitutional jurisdiction of the Federal Parliament, it was nevertheless upheld as constitutional under the national concern for peace, order and good government doctrine; *Regina v. Crown Zellerbach Canada Ltd.*, 49 *Dominion Law Reports*, Fourth Series (1988), 161. Only dissenting Justice La Forest underlined the «importance of linking the prohibition to the purpose sought to be achieved. At time, that link can be inferred (...). In other cases, cogent proof will be required»; *id.* at 196. See generally VanderZwaag, *Canada and Marine Environmental Protection*, (Kluwer Law International, 1995).

(235) Or best environmental practice(s): 1992 ECE Watercourses Convention, Art. 3(1)(g); 1992 OSPAR Marine Environment Convention, Annex I, Art. 1(1) and Annex III, Art. 2(1); 1992 Baltic Sea Convention, Art. 3, and Annex I, Regul.3. 1991 Antarctic Treaty Environmental Protocol provides that the duty to remove certain kinds of wastes disposal shall not apply «in circumstances where the removal of such wastes by any practical option would result in greater adverse environmental impact than leaving them in their existing locations», Annex III, Art. 2(1). While no express provision is made to it, choice of best environmental option is actually implied in the prior justification procedure set forth by OSCOM, which requires the demonstration (a) of the lack of other practicable alternative to the envisaged dumping of industrial waste, and (b) the harmlessness to the environment of the materials to be dumped, before any authorisation to proceed is given; OSCOM Recommend. 89/1, on the Reduction and Cessation of Dumping Industrial Wastes at Sea. PARCOM Technical Working Group issued recommendations for the elaboration of best environmental practices for the agricultural sector, to reflect a precautionary and clean production approach, and address all pollution and resources-related problems; Recommendations for Establishing the Best Environment Practices for the Agricultural Sector, prepared for the Nineteenth Meeting of the Technical Working Group of the Paris Commission (1992); posted on Greenpeace Website @ <<http://www.greenpeace.org>>.

See constant direct or indirect referenceto best environmental option/practices in 1992 Agenda 21, *inter alia*, Para. 9.12, calling for the identification of 'economically viable and environmentally sound energy (continued)

documents which refer to a best (practicable) environmental option remain evasive on the meaning of the expression⁽²³⁶⁾, its development and interpretation in the UK is enlightening regarding both its implications and the difficulties associated with its implementation⁽²³⁷⁾. The Royal Commission on Environmental Pollution defines the concept as:

«...[T]he outcome of a systematic consultative and decision-making procedure which emphasises the protection and conservation of the environment across land, air and water. The BPEO procedure established, for a given set of objectives, the option that provides the most benefit or least damage to the environment as a whole, at acceptable cost, in the long term as in the short term.»⁽²³⁸⁾

The best environmental option emerged in the UK and other industrialised States in the context of industrial pollution control, as the most viable and efficient alternative to the classic assessment techniques traditionally focused on the impact of industrial processes on particular environmental media individually considered without particular consideration paid to potential transfer of pollution from one medium to another *via* contamination or dispersion. The need for cross-media pollution control was increasingly recognised in the mid 1980s, with the establishment of a link between air, water and land pollution⁽²³⁹⁾ of environmental impact; this led to the endorsement of the concept of best practicable environmental option in national and international environmental law.

The implications of the principle of best environmental option has yet proved far more problematic than originally envisaged. To be fully operational, the principle requires extensive research and studies, which are often complex, lengthy and costly, namely:

sources; Para. 9.15, concerning the development of cost effective, more efficient, less polluting and safer transport systems; Para. 11.22, on environmentally sound and economically viable methods and practices of forests harvesting; Para. 18.40, calling for the adoption of best environmental practices at reasonable cost to avoid freshwater pollution; Para. 20.13, on cost-effective alternatives for processes and substances that generate hazardous wastes; Para. 21.20, on identification of promising socially acceptable and cost-effective forms of solid wastes reuse and recycling.

(236) Most of the international documents referred to set a number of criteria to be considered when selecting the best environmental practices/option, which are only indirectly precautionary.

(237) Ball & Bell, *ibid. supra* n. 211, at 289-290.

(238) *Twelfth Report: Best Practicable Environmental Option*, at Para. 2.1.

(239) See for instance EEC Fourth Environmental Action Programme (1987-1992). See also British Royal Commission on Environmental Pollution's *Fifth Report: Air Pollution Control: An Integrated Approach*, published in 1976 already and drawing a clear link between the pollution of air, water and land. In the UK, a unified inspectorate of pollution was set in 1987, to replace the various 'medium-specific' inspectorates; it was vested with the responsibility to tackle more efficiently environmental pollution, resorting *inter alia* to best practicable environmental option; the concept was endorsed in the Environment Protection Act 1990, S. 7.

- (1) a study on the cross-media pollution transfer, which requires availability of, and access to, numerous data often temporally and spatially arbitrary;
- (2) an 'imaginative' identification of other feasible options, and comparative cost-benefit analysis with respect to general environmental considerations, which also means a not always appropriate, or even feasible, economic valuation of environmental resources and impact;
- (3) finally, the notion of best environmental option raises a dilemma of subjective choices that would favour one aspect of the environmental against another, or any socio-economic aspect against environmental aspect, or vice-versa.

An excellent illustration of the preservation of one environmental element at the expense of another was provided with the recent controversy concerning the disposal of the *Brent Spar* in the North Sea. In that case, a choice had to be taken between deep-sea pollution and on-land pollution. Although a best practicable environmental option study established in compliance with the UK standards had concluded in favour of deep-sea disposal, popular pressure forced the owning company Shell to have it dismantled and disposed ashore. As an author rightly pointed, one of the difficulties for the scientific community in that case was that «in any evaluation of options for the abandonment of an offshore installation it has to be assumed that all options considered are acceptable to the public. Scientific assessment may be able to distinguish between options in an evaluative manner but it cannot (...) determine that any one of the options is acceptable when other societal values and criteria are invoked»⁽²⁴⁰⁾.

Certain guidelines have been set, for the selection of best environmental practices or options⁽²⁴¹⁾, but further clarification is still awaited to effectively reflect the necessary limits to the principle of precaution.

6. Concluding Comments

The rapidity of the world evolution, the potential impact of human action on the environment and the development of new technologies call for more precaution at an earlier stage of potential environmental degradation or depletion, viz. at the stage of risk, rather than danger, of potentiality rather than fatality. Certain risks are the result of

(240) Side, 'The Future of North Sea Oil Industry Abandonment in the Light of the Brent Spar Decision', 21 *Marine Policy* (1997), 45, at 47. It is in this respect very significant to note that 1997 Esbjerg Ministerial Declaration on the North Sea, although formally (re)endorsing the precautionary principle, provides for the disposal of decommissioned offshore installation on land (Para. 54); UK, alongside France and Norway, entered a 'reservation' on that paragraph, on the ground that disposal on land was not always necessarily the best practicable environmental option.

(241) See *Twelfth Report: Best Practicable Environmental Option*, at Chap. 3 (summary table page 14); see also relevant annexes of the international treaties referred above.

complex processes which require years of research before science can possibly offer some explanation and suggest some elements of solution. Meanwhile, those risks are just too consequential to speculate on their non-realisation, and measures are promptly needed, at least to prevent the situation from deteriorating further or the risk to be realised.

It can be gleaned from state practice, both at domestic and international level, that there is a growing consensus on the need to act and take concrete measures with regards to certain environmental threats despite the lack of scientific certainty. It is still too early, however, to decide how far States, and any other non-state entities involved in hazardous activities, are ready to go in the implementation of precautionary measures to avert uncertain risks, for the sake of the long term hypothetical benefit of mankind, often at the expense of their own immediate and very concrete benefit. Nor is it clear how far developed countries' apparent commitment to the principle of precaution will encourage them to overcome their traditional reticence effectively to assist, financially and technically, less developed countries in implementing a precautionary policy. Whilst it seems evident that the principle of precaution, at least in the context of *international* environmental law, cannot have the ambition of setting rigid, definitive and universal criteria to distinguish those risks which are acceptable from those which are not, the actual efficiency of the principle in the long run, and indeed its legal significance, will depend upon a clarification of the circumstances and conditions of its application.



CHAPTER FOUR.
INTERGENERATIONAL EQUITY: A BASIS FOR A PLANETARY TRUST

1. <u>Introduction</u>	179
2. <u>Environmental Fairness</u>	184
i. Generalities on the Institution of Trust in English Law.....	186
ii. Elements of a Planetary Trust	191
a. <i>Framework Criteria</i>	192
b. <i>Basic Principles</i>	193
c. <i>Planetary Rights and Obligations</i>	194
iii. Intergenerational Equity as a Normative Framework for Sustainable Development.....	196
3. <u>Major Shortcomings of the Planetary Trust Theory</u>	198
i. Moral Foundations for Planetary Rights and Obligations: the Moral Sense of Obligations to Future Generations.....	199
ii. Legal Basis for a Planetary Trust: Intergenerational Equity as a Fundamental Principle Deeply Rooted in International Law.....	201
iii. Operational Implications of a Planetary Trust.....	209
iv. Pertinence of the Planetary Trust Theory to Preserve a Certain Quality Environment	214
4. <u>Beyond the Rhetoric of a Planetary Trust: Intergenerational Equity as an Inspirational Principle of Modern International Environmental Law</u>	216

1. Introduction

In 1893, the US representative Carter justified seizure of a British vessel taking seals on the high seas as a measure necessary to preserve fur seals from over exploitation, rightfully taken by the US as the 'trustee of the herd for the benefit of mankind'; he stated:

«The Earth being designed for the permanent abode of man, each generation is entitled to its *use*, and the law of nature forbids that any waste should be committed to the disadvantage of the succeeding tenants.»⁽¹⁾

⁽¹⁾ *Pacific Fur Seals* arbitration (1893), 1 Moore *International Arbitrations*, 755, at 843; for a comment on the case, Birnie & Boyle, 492 *et sequ.*

Over a century later, a Supreme Court Judge in the Philippines recognised *locus standi* to children acting for themselves, for others of their generations and for future generations; he affirmed that

«Their personality to sue in behalf of the succeeding generations can only be based on the concept of intergenerational responsibility insofar as the right to a balanced and healthful ecology is concerned.»⁽²⁾

The argument of equity for future generations is by no means recent⁽³⁾, nor is it the exclusive attribute of environmental law⁽⁴⁾. Nevertheless, recent developments in this area of law, most notably the emergence of the paradigm of sustainable development integrating intergenerational equity in its very definition⁽⁵⁾, has turned intergenerational equity into an unavoidable principle of international environmental law, regularly cited

⁽²⁾ *Minor Oposa v. Secretary of the Department of Environment and Natural Resources*, Supreme Court of the Philippines (Justice Davide), 30 July 1993; 33 *ILM* (1994), 173, at 185 (hereafter *Minors Oposa case*).

⁽³⁾ Hence for instance, the 1946 International Convention for the Regulation of Whaling, Para. 1, recognises «...the interest of the nations of the world in safeguarding for future generations the great natural resources represented by the whales...»; likewise, the 1968 African Convention on Nature, Para. 6, expresses States' desire to a joint action for the conservation and utilisation of environment assets «by establishing and maintaining their rational utilization for the present and future welfare of mankind». Brown Weiss found that intergenerational equity, and to a certain extent, the idea that the earth is held in trust for future generations, are deeply anchored in the Judeo-Christian traditions and various Asian non theistic traditions, and are reflected in Islamic law, in most African systems, and in certain social and civil legal systems, as illustrated by the numerous States Constitutions referring expressly to intergenerational equity, or more globally, to a generic right to a clean and healthy environment; Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity* (United Nations University Press/Transnational Publisher, 1989) (hereafter referred to after the title), 18 *et sequ.* A number of national constitutional provisions on environmental rights and duties are reproduced in *In Fairness to Future Generations*, Appendix B.

⁽⁴⁾ The 1945 Charter of the United Nations for instance, expresses the commitment of States «to save succeeding generations from the scourge of war...» (Para. 1). Reference to intergenerational equity is also made in the area of economic development; hence for instance, the 1974 NIEO Declaration mentions, in introduction to its operational part, States' determination to work urgently for the establishment of a NIEO *inter alia* «... to ensure (...) peace and justice for present and future generations». Along the same line, the 1970 Strategy for the Second Development Decade provides that «...the 1970s must make a step forward in securing the well-being and happiness not only of the present generation but also of the generations to come» (Para. 4); see also 1980 Strategy for the Third Development Decade, Para. 41. No reference to intergenerational equity was contained either in the 1961 Strategy for the First Development, or in the 1990 Strategy for the Fourth Development Decade (although the latter make reference to the future world; Paras. 19 and 20). Brown Weiss argues, in a rather disputable fashion, in favour of the inherently intergenerational nature of certain human rights documents referring to peoples, human family or mankind; see *infra* Legal Basis for a Planetary Trust: Intergenerational Equity as a Fundamental Principle Deeply Rooted in International Law. At a more philosophical level, intergenerational equity was associated to the indirectly environment-related debate on population control; see Parfit's path-breaking contribution on the issue, 'Overpopulation and the Quality of Life', in Singer (ed.), *Applied Ethics* (Oxford University Press, 1985), Chap. X; see *infra* n. 89.

⁽⁵⁾ See *infra* iii. Intergenerational Equity as a Normative Framework for Sustainable Development.

in declarations⁽⁶⁾ and treaties⁽⁷⁾. The extremely vague wording of intergenerational equity clauses, *inter alia* their lack of clearly articulated implications, reveals the essentially inspirational nature of their message calling for a long-term perspective on environmental issues and policies⁽⁸⁾. Some authors, however⁽⁹⁾, consider that

(6) *Inter alia* 1972 Stockholm Declaration on the Human Environment, preambular Paras. 6 and 7, and operational Princ. 1 and 2; 1975 Economic Charter, Art. 30; 1975 Helsinki Final Act of CSCE, Sect. on the Environment, preambular Para. 1; Res. 3384 (XXX), 10 November 1975, proclaiming the Declaration of the Use of Scientific and Technological Progress in the Interest of Peace and for the Benefit of Mankind, Art. 4; 1980 Resolution on the Historical Responsibility of States for the Preservation of Nature for Present and Future Generations, Para. 1; 1980 Salzburg Declaration, Para. 1.1; 1982 World Charter for Nature, preambular Para. 5; 1986 Tunis Declaration on Environment and Development, I(3); 1986 WCED-EG Legal Principles for Environmental Protection and Development, Art. 2; 1982 Nairobi Declaration, Para. 10; 1988 Resolution Res./43/53, on the Protection of Global Climate for Present and Future Generations of Mankind; 1989 Paris Economic Declaration of the G7, Sect. on the Environment, Para. 33; 1989 Langkawi Declaration of the Commonwealth Heads of Governments, Para. 1; 1989 Brasilia Declaration on the Environment, Para. 1; 1990 Conclusion of the Siena Forum on International Law of the Environment, Para. 13(f); 1990 Bergen Ministerial Declaration on Sustainable Development, Preamble, and Para. 5; 1990 Bangkok Ministerial Declaration on Sustainable Development, Para. 15; 1990 Tlatelolco Platform on Environment and Development, Para. 7; Para. 2; 1991 ECE Draft Charter on Environmental Rights and Obligations, Princ. 1; 1992 Rio Declaration on Environment and Development, Princ. 3; 1992 Forestry Principles, Princ. 2(b); 1995 IUCN Draft International Covenant on Environment and Development, Art. 5; 1995 Code of Conduct for Responsible Fisheries Management, Introduction and Art. 6(2); Statement of Conclusions of the intermediate Ministerial Meetings on the Protection of the North Sea, Bergen, March 1997, Princ. 2.1; the Statement of Conclusions is posted on the North Sea Conference website @ <<http://odin.dep.no/md/publ/conf/soc.html>>.

(7) See for instance 1972 World Heritage Convention, Art. 4; 1972 London Convention on Dumping of Wastes, implicitly; 1973 CITES, preambular Para. 1; 1976 Apia Convention on Nature in the South Pacific, preambular Para. 6; 1976 Barcelona Convention on Mediterranean Sea, preambular Para. 2; 1977 ENMOD Convention, Preamble; 1978 Kuwait Convention on the Marine Environment in the Arabian Gulf, Preamble; 1979 Bonn Convention on the Conservation of Migratory Species, preambular Para. 2; 1979 Moon Treaty, Art. 4(1); 1979 Bern Convention on the Conservation of European Wildlife, preambular Para. 3; 1982 Jeddah Convention for the Conservation of the Red Sea and Gulf of Aden Environment, Art. 1(1); 1983 Cartagena Protocol Concerning Cooperation in Combating Oil Spills in the Wider Caribbean Region, Preamble; 1985 Nairobi Convention on the Marine Environment in East Africa, Para. 2; 1985 ASEAN Agreement on the Conservation of Nature, preambular Para. 1; 1986 Noumea Convention on the Environment in the South Pacific, preambular Para. 3; 1987 Montreal Protocol on the Ozone Layer, implicitly; 1989 ACP-EEC Lomé IV, Art. 33; 1992 ECE Watercourses Convention, Art. 2(5); 1992 Biodiversity Convention, preambular Para. 23; 1992 Climate Change Convention, Art. 3(1) (no reference to future generations is contained in 1997 Kyoto Protocol to the Climate Change Convention); 1992 ECE Industrial Accidents Convention, preambular Para. 1; 1992 OSPAR Marine Environment Convention, preambular Para. 3; 1992 Baltic Sea Convention, implicit in Preamble; 1994 Desertification Convention, preambular Paras. 15 and 26; 1997 UN Convention on the Non-Navigational Uses of International Watercourses, preambular Para. 5; 1976/95 Barcelona Convention on Mediterranean Sea, preambular Para. 2, Art. 4(2).

(8) See Birnie & Boyle, 210-212; Birnie, 'International Environmental Law: its Adequacy for Present and Future Needs', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 2, at 79; Boyle, Review of *In Fairness To Future Generations*, 40 *ICLQ* (1991), 230; Jurgielewicz, *Global Environmental Change and International Law: Prospects for Progress in the Legal Order* (University Press of America, 1996), 65; Pasck, 'Obligations to Future Generations: A Philosophical Note', 20 *World Development* (1992), 513. Sands takes a more cautious stance, and while recognising that the principle is now 'firmly implemented in international law', he believes that the principle could have been accepted as «an article of good faith, drawing on pre-existing language in earlier treaty and other soft-law developments»; see *infra* n. 169. Some scholars dismiss the
(continued)

intergenerational equity is a source of legally binding rights and obligations between successive generations, which is most frequently institutionalised in the form of a planetary trust⁽¹⁰⁾, or more rarely stewardship⁽¹¹⁾, *parens patriae*⁽¹²⁾ or partnership⁽¹³⁾.

very idea of a moral obligation to future generations, let alone that of a legal obligation, as complete incoherence; D'Amato, 'Do We Owe a Duty to Future Generations to Preserve the Global Environment?', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 190; Schwartz, 'Obligations to Posterity', in Sikora & Barry (eds.), *Obligations to Future Generations* (Temple University Press, 1978), 3; Warren, 'Do Potential People Have Moral Rights?', in Sikora & Barry (eds.), *Obligations to Future Generations* (Temple University Press, 1978), 14.

(9) Brown Weiss, 'The Planetary Trust: Conservation and Intergenerational Equity', 11 *Ecology LQ* (1984), 495 (hereafter referred to after the title); Gündling, 'Our Responsibility to Future Generations', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 206; Kavka, 'The Futurity Problem', in Sikora & Barry (eds.), *Obligations to Future Generations* (Temple University Press, 1978), 180; Singh, 'Sustainable Development as a Principle of International Law', in De Waart *et al.* (ed.), *International Law and Development* (Martinus Nijhoff, 1988), Chap. 1.1; Redgwell, 'Intergenerational Equity and Global Warming', in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 3; Young, *For Our Children's Children: Some Practical Implications of Inter-Generational Equity and the Precautionary Principle*, Resource Assessment Commission Occasional Publication No. 6 (Australian Government Publishing Service, 1993); Chowdhury apparently concurs with the idea of a planetary trust, although he harbours certain reservations as to the practical utility of Brown Weiss' theory; 'Intergenerational Equity: Substratum of the Right to Sustainable Development', in Chowdhury *et al.* (eds.), *The Right to Development in International Law* (Martinus Nijhoff, 1992), Chap. 3.1. The theory of intergenerational equity and planetary trust has also found strong support in the Experts Group on Environmental Law of the World Commission on Environment and Development (see *Environmental Protection and Sustainable Development* (Graham & Trotman/Nijhoff, 1987), at 43), as well as in the progressive ICJ Judge Weeramantry; see his separate and dissenting opinions in *Maritime Delimitation in the Area between Greenland and Jan Mayen, Judgment*, ICJ Rep. 1993, 38, Weeramantry (sep.op.), at Paras. 240 *et sequ.*; ICJ's order on the *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*, ICJ Rep. 1995, 288, at 341; *Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons*, ICJ Rep. 1996, 1, Weeramantry (dis.op.), Point II(3)(b). See also Saladin & Zenger's advocacy for a declaration on the rights of future generations, in *Rechte Künftiger Generationen* (Helbing & Lichtenhahn, 1988), at 46-47.

(10) 'The Planetary Trust: Conservation and Intergenerational Equity'.

(11) Supanich, 'The Legal Basis of Intergenerational Responsibility: An Alternative View - The Sense of Intergenerational Identity', 3 *YbIEL* (1992), 94; see also Clingan, 'The Law of the Sea Convention: International Obligations and Stewardship Responsibilities of Coastal Nations', 17 *OCM* (1992), 201; Dan Tarlock, 'Stewardship Sovereignty: The Next Step in Former Prime Minister Palmer's Logic', 42 *Washington University Journal of Urban & Contemporary Law* (1992), 21, at 26; Hamrin, 'A New Paradigm for Global Justice and Stewardship', 21 *Future* (1989), 608; Redgwell, 'Energy and Environment: From State Sovereignty to National/International Stewardship?', Conference Paper, Aberdeen, 1996; Van Dyke, 'The Rio Principles and our Responsibilities of Ocean Stewardship', 31 *OCM* (1996), 1. Redgwell regards the principle of stewardship or custodianship, which she bases upon WCED's definition of sustainable development, as the antidote for still prevailing international legal principle of permanent sovereignty over natural resources, that leaves States free to exhaust domestic non-renewable energy resources. It is unclear whether Redgwell, and indeed the other authors referring to a stewardship, construe it in the sense of a trust, or as a mere expression of the necessity to consider the interests of generations to come even in the exploitation of resources under State jurisdiction.

(12) *Minors Oposa case*, *supra* n. 2.

(13) Brown Weiss, 'Our Rights and Obligations to Future Generations for the Environment', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental* (continued)

The purpose of this Chapter is not to offer a comprehensive picture, nor to compile a detailed analysis of the planetary trust theory and related controversies. It sets out, in a first stage, to evaluate the extent to which an hypothetical planetary trust could fulfil the same functions as the domestic institution, and effectively compel the present generation to preserve the *corpus* of the environment held in trust for future generations, and thereby secure an equitable satisfaction of immediate needs 'without compromising the ability of future generations to meet their own needs'(14).

In the light of the fundamental contextual differences existing between the domestic institution and the proposed international institution, relating to the 'object' in trust and to the implementation and supervision mechanism, any attempt to create an international institution similar to the domestic institution to ensure a sustainable management of environmental resources appears particularly hazardous, if not a purely theoretical exercise.

It is argued that, albeit short of constituting a genuine source of rights and obligations, the principle of intergenerational equity represents nonetheless a valuable inspirational principle of international environmental law, that could 'revive' the often neglected (but existing) temporal dimension of the law. As underlined by Mostafa Tolba such dimension is particularly relevant in the area of the environment:

«The ecological inter-dependence, which transpierces the world community, has obtained not only spatial, but also temporal (inter-generational) parameters.»(15)

This chapter is more particularly concerned with the so-called intergenerational (temporal) dimension of equity; intragenerational equity and partnership are more appropriately dealt with in other Chapters(16).

Responsibility, 84 *AJIL* (1990), 198; *In Fairness of Future Generations*, 23. 1992 Rio Declaration on Environment and Development refers in very vague terms, to a global partnership to ensure better future for all (Princ. 21). See also Young, *supra* n. 9, at 3. The theory of a 'partnership' between generations, mentioned but otherwise not elaborated upon by Brown Weiss, is not directly considered in the present chapter, although most of the remarks made with regard to a planetary trust equally applies to an intergenerational partnership. One could perhaps add that such partnership appears even less realistic than a planetary trust, as it is particularly difficult to conceive a partnership relation between an existing and a not yet existing entity; a partnership is really based on the co-operation of the partners; see *infra* Chap. 5, Principle of Partnership.

(14) See *infra* C) Intergenerational Equity as a Normative Framework for Sustainable Development.

(15) Note of UNEP Executive Director on the Implications of the "Common Concern of Mankind" Concept on Global Environmental Issues to the UNEP Group of Legal Experts Meeting of Malta, 13-15 December 1990, reproduced in Cançado Trindade (ed.), *Human Rights, Sustainable Development and Environment* (Instituto Interamericano de Desarrollo, 1995), 318.

(16) On equity and solidarity between States, see *infra* Chap. 5 Principle of Partnership; on the so-called 'intra-State' partnership, or partnership between States and individuals, and between individuals, see *infra* Chap. 6, Principle Pertaining to Public Participation.

2. Environmental Fairness

Intergenerational equity in the field of the environment is based on the fundamental tenet that human beings today (the present generation) are due to preserve a certain environmental quality to human beings yet to come (future generations). To attribute a legal framework to the argument of intergenerational responsibility, the proponents of a legal conception of intergenerational equity resort to the fiction of a planetary trust modelled upon the Common law institution of trust and more particularly that of the charitable trust⁽¹⁷⁾.

One should perhaps mention from the outset that references to domestic institutions in international law are not rare; Judge McNair pointed out in his separate opinion in the ICJ advisory opinion concerning the *Status of South-West Africa* that «international law has recruited and continues to recruit many of its rules and institutions from private systems of law»⁽¹⁸⁾. In the same vein, the International Court of Justice recognised the importance of institutions of municipal law in international law in the *Barcelona Traction Ltd* case, stressing however that «[the recognition of the importance of institutions of municipal law] does not necessarily imply drawing any analogy between [international law] institutions and those of municipal law, nor does it amount to making rules of international law dependent upon categories of municipal law»⁽¹⁹⁾.

It is also worth mentioning that only few references are made by the tenants of the planetary trust theory to the trusteeship system provided for under the 1945 UN Charter, Chapters 12 and 13⁽²⁰⁾. It is accurate to argue that UN trusteeship is closer to a 'tutelle internationale' to foster smooth transition from colonial rule to self-government, than it is to a genuine trust as understood in domestic law. Trusteeship agreements would provide for all legal, administrative and juridical powers of the trustee in the non

(17) In fact, even the moral nature of intergenerational obligations is the object of a very sharp philosophical debate; see *infra*, i. Moral Foundations for Planetary Rights and Obligations: the Moral Sense of Obligations to Future Generations.

(18) ICJ *Rep.* 1950, 128, McNair (sep.op.), at 148.

(19) ICJ *Rep.* 1970, 3, Paras. 37-38.

(20) Some authors consider that the trust is already firmly implanted in international law in the form of the mandate system set up under the League of Nations, and constitute therefore a 'general principle of law' under 1945 ICJ Statute, Art. 38(1)(c); see for instance Redgwell, 'Intergenerational Equity and Global Warming', in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 3, at 43. Others on the other hand, without invoking the mandate system set up under the League of Nations, simply refer to the increasing tendency, more particularly in international environmental law, to set up *trust* funds to finance the implementation of specific conventions, or environmentally friendly projects; see on that point *inter alia* Sand, *Trusts for the Earth, New Financial Mechanisms for International Environmental Protection*, Occasional Paper (Hull University Press, 1994), and *infra* Chap. 5/3/i. Financial Assistance: Additionally and Compensation.

self-governing territory, but entailed no dissociation of the beneficial and legal ownership as such.

The trusteeship system was primarily concerned with international peace and security, economic, political, social and educational advancement, and respect for human rights⁽²¹⁾. Nonetheless, the ICJ stated that the mandate system established under the Covenant of League of Nations «was created in the interests of the inhabitants of a territory and of humanity in general, as an international institution with an international object -a sacred trust of civilization»⁽²²⁾. Judge McNair, dissenting from the advisory opinion on the *Status of South-West Africa*, drew upon the American and English laws on trust to outline the main characteristics of the lease under the league of Nations mandate system⁽²³⁾.

The planetary trust theory postulates that each generation receives a natural and cultural legacy in trust from previous generations and holds it in trust for future generations⁽²⁴⁾. Hence the duties borne by the present generation with respect to the

(21) See the reproduction of texts of the various trusteeship agreements concluded under the aegis of the UN Charter in Ku (ed.), *A Comprehensive Handbook of the United Nations, a Documentary Presentation in Two Volumes* (Monarch Press, 1979), 594 *et sequ.* For a comprehensive reading of the UN Charter provisions on trusteeship, see Simma (ed.), *The Charter of the United Nations, a Commentary* (Oxford University Press, 1995), at 933 *et sequ.*

(22) Advisory opinion concerning the *Status of South-West Africa*, *ICJ Rep. 1950*, 128, at 132; *South West Africa, Second Phase, Judgment, ICJ Rep. 1966*, 6, at Para. 51.

(23) *ICJ Rep. 1950*, 128, at 148-149.

(24) *In Fairness to Future Generations*, 2. Brown Weiss offered the most comprehensive and acclaimed contribution to the legal debate on intergenerational equity, and is accountable for a great part of the planetary trust theory, *inter alia* with her path-breaking article entitled 'The Planetary Trust: Conservation and Intergenerational Equity', 11 *Ecology LQ* (1984), 495, subsequently further elaborated in *In Fairness to Future Generations*. See also from the same author: 'Conflicts Between Present and Future Generations Over New Natural Resources', in Dupuy (ed.), *The Settlement of Disputes on the New Natural Resources*, Hague Academy of International Law Workshop 1982 (Martinus Nijhoff, 1983), 177; 'Conservation and Equity Between Generations', in Buergenthal (ed.), *Contemporary Issues in International Law: Essays in Honour of L.B.Sohn*, (N.P.Engel Publisher, 1984), 245; 'International Law, Common Patrimony and Intergenerational Equity: Research in Progress', in Dupuy (ed.), *The Future of International Law of the Environment*, Hague Academy of International Law Workshop 1984 (Martinus Nijhoff, 1985), 445; 'Intergenerational Justice and Intergenerational Law', in Busuttil *et al.* (eds.), *Our Responsibilities Towards Future Generations, A Programme of UNESCO and the International Environment Institute* (Foundation for International Studies & UNESCO, 1990), 95; 'Our Rights and Obligations to Future Generations for the Environment', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 198; 'Intergenerational Equity: Legal Framework for Global Environmental Change', in Brown Weiss (ed.), *Environmental Change and International Law: New Challenges* (United Nations University Press, 1992), Chap. 12; 'Intergenerational Equity: Towards International Legal Framework', in Choucri (ed.), *Global Accord: Environmental Challenges and International Responses* (MIT, 1993), Chap. 10; 'International Environmental Law: Contemporary Issues and the Emergence of a New World Order', 81 *Georgetown LJ* (1993), 676; 'Environmental Equity: the Imperative for the Twenty-First Century', in Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, 1995), Chap. 3; 'Environmental Equity and International Law', in UNEP (ed.), *UNEP's New Way Forward: Environmental Law and Sustainable* (UNEP, 1995), Chap. 2; 'Intergenerational Equity and Rights of Future Generations', in Cançado Trindade (ed.), *Human Rights, Sustainable Development and* (continued)

management of the *corpus* of the trust flow from its quality of trustee, whilst the rights vested in future (and present) generations inhere in their status as beneficiaries of the trust; intergenerational rights and obligations have therefore a legal as much as moral value. The prime objective of the planetary trust is «to sustain the welfare of future generations»⁽²⁵⁾.

i. Generalities on the Institution of Trust in English Law

The trust is a mechanism proper to the systems of Common law⁽²⁶⁾, which was created, developed and originally enforced on the basis of equitable and just

the Environment, Seminário de Brasilia de 1992 (Instituto Interamericano de Derechos Humanos, Banco Interamericano de Desarrollo, 1995), 71; 'Intergenerational Fairness for Fresh Water Resources', 25 *EPL* (1995), 231. The planetary trust theory presented in this chapter draws essentially from Brown Weiss' theory, insofar as it is not substantially departed from by the other tenants of the theory.

(25) 'The Planetary Trust: Conservation and Intergenerational Equity', at 508.

(26) By 'Common law systems', one ought to understand those legal systems progressively built upon decisions of superior courts as source of law, as opposed to civil continental systems based upon various codes elaborated in the previous and present centuries, and themselves inspired by Roman Law; see Bailey & Gunn, *Smith & Bailey on the Modern English Legal System* (Sweet & Maxwell, 1996) (hereafter referred to after the title), 4 *et sequ.* For practical reasons, and although the planetary trust theory was primarily developed by American scholars hence based on American Common law and jurisprudence, major focus is laid in the present chapter on the English Common law and the English system of equity jurisprudence. The English trust was adopted, with some qualification, by the Crown colonies, and the 13 original American States, and constitutes the very foundation of American trust law. Notwithstanding minor differences subsequently introduced as a result of separate evolution of the American and English Common and Equity law, the American trust has remained very similar to its original model; Bogert, *Trusts*, 6th edn (West Publishing Co., 1987), 5 *et sequ.* (hereafter Bogert, *Trusts*).

Despite the fact that a small number of civil law countries have introduced the institution of trust in their legal system by the means of legislation (for instance Puerto Rico, Cuba, Mexico, and in the US, Louisiana, which legal system is founded on the civil law; reported in Bogert, *Trusts*, 7), the trust remains a peculiarity of Common law systems. And indeed, the lack of acquaintance with the long tradition and precedents related to the trust of civilian lawyers often means that the trust in civil legal systems differs from the Common law trust; see Fratcher, 'Trust', in *International Encyclopedia of Comparative Law*, Vol. V, Chap. 11 (J.C.B. Mohr, 1972), Sect. 100-123; Spirou, 'Une lacune du droit civil: Le Trust', 45 *Revue Hellénique de Droit International* (1992), 195; see also Dreyer, *Le Trust en droit suisse* (Etudes suisse de droit international, Vol. 21, 1981). Nevertheless, several 'civil law' institutions sharing some of the features of the trust, or other legal situations, provide close comparison with the way trusts operate; Fratcher, 'Trust', *ibid.*, Sect. 124-141. See also Merryman's enlightening comparative study of the principal institutions of property law under Italian law and English Common law, 'Ownership and Estate (Variations on a theme by Lawson)', 48 *Tulane LR* (1974), 916. For a brief review of trust-like devices under German, Danish and French systems, see Wilson (ed.), *Trusts and Trust-Like Devices*, United Kingdom Comparative Law Series, Vol. 5 (The Chameleon Press, 1981).

The unfamiliarity of civil practitioners with the institution of trust was particularly clearly illustrated with the difficulty met by the Swiss Federal Court (Schweizerischer Bundesgericht; Tribunal Fédéral) when faced with the question of the validity and effects of a trust constituted in Zurich, by an American citizen, appointing a Swiss Bank as trustee. Not acquainted with the institution, the Federal Court finally decided to resort to analogies and assimilated the reality of the trust in that particular case, to a combination of no less than three Swiss private law institutions, *viz.* (1) fiduciary agreement (fiduziarische Eigentumsübertragung); (2) undertaking to give (Schenkungsversprechen); (3) provision in favour of a third party (Vertrag zugunsten Dritter); *Harrison v. Schweizerische Kreditanstalt* (1970), BGE 96 II 79, partly translated in French at JT 1971 I 322, see more particularly Para. 8. For a thorough study of the

(continued)

considerations⁽²⁷⁾ rather on the basis of legal considerations⁽²⁸⁾. For this reason, the institution of trust is regarded as the 'outstanding creation of equity'⁽²⁹⁾.

For want of a unanimous definition of trust⁽³⁰⁾, the trust can be defined after the 1985 Hague Convention of the Law Applicable to Trusts and on their Recognition⁽³¹⁾:

difficulties to apprehend the institution under Swiss law, see Dreyer, *Le Trust en droit suisse* (Georg, 1981); Flattet, 'Le Trust en droit suisse', in *La fiducie ou du trust dans les droits occidentaux francophones*, 44 *Revue juridique et politique, indépendance et coopération* (1990), 263. The suggestion was also made by certain civil law scholars, to model the right to use environmental heritage on the Roman law institution of *ususfructus*; see Sambon, 'L'usufruit, un modèle pour le droit d'usage du patrimoine environnemental', in Ost & Gutwirth (eds.), *Quel avenir pour le droit de l'environnement ?*, Actes du colloque organisé par le Centre d'étude du droit de l'environnement et le *Centrum interactie recht en technologie* (Facultés Universitaires Saint-Louis, 1996), 173. For a description of the main features of the institution of *ususfructus* in Roman law: Schmidlin & Cannata, *Droit Privé Romain*, Vol. I (Payot, 1984), 200 *et sequ.*

(27) In Common law systems, a classic eighteenth century *dictum* is usually quoted, which defines equity as «...not part of the law, but a moral virtue, which qualifies, moderates, and reforms the rigour, hardness, and edge of the law, and is universal truth; it also assists the law where it is defective and weak in the constitution (...) and defends the law from crafty evasions, delusions, and new subtleties, invented and contrived to evade and elude the common law, whereby such as have undoubted rights are made remediless; and this is the office of equity, to support and protect the common law from shifts and crafty contrivances against justice of the law»; *Lord Dudley and Ward v. Lady Dudley* (1705), Prec.Ch. 241, at 241, relevant extracts in *Snell's Principles of Equity*, 6. Contrast this definition with the definition of equity in international law, *infra* ii. Elements of a Planetary Trust.

(28) Equity Courts developed in England in the late sixteenth century, as a mechanism to correct or mitigate the rigidity of Common law principles developed and enforced by the Courts of Common law. The Courts of Equity, the Chancery Courts, would reach a decision on equitable considerations where a strict compliance with the precedent developed by superior courts would lead to unfair or absurd results. For a brief historical overview of development of Equity in parallel to the Common law, see *Smith & Bailey on the Modern English Legal System*, 4 *et sequ.* See further on equity as a source of law in the English legal system, Baker & Langan, *Snell's Principles of Equity*, 28th edn (Sweet & Maxwell, 1982) (hereafter referred to after the title), Chap. 1; Martin, *Hanbury & Maudsley: Modern Equity*, 13th edn (Stevens & Sons, 1989) (hereafter referred to after the title), Chap. 1; Pettit, *Equity and the Law of Trusts*, 8th edn (Butterworths, 1997), Chap. 1.

(29) One could perhaps note that the ancestor to the trusts, the uses, were introduced into England after the Norman Conquest, in 1066 ADD, but were not enforced by the Courts before the fifteenth century. Pettit, *Equity and the Law of Trusts*, *supra* n. 28, at 10. On the historical sources of the institution of trust in English law, see Moffat, *Trusts Law, Text and Materials*, 2nd edn (Butterworths, 1994), Chap. 1; *Parker & Mellows: The Modern Law of Trust*, Chap. 1. There has been a tendency to codify parts - yet not all- of the judicial decisions composing the body of trust law, both in England and in the US; see in England, the Trustee Act 1925; the Judicial Trustees Act 1896; the Perpetuities and Accumulations Act 1964; the Public Trustee Act 1966; the Variation of Trusts Act 1958; the Charitable Trusts Act 1853-1860; The Charitable Trusts (Validation) Act 1954; the Charities Acts 1960, 1985, 1992, 1993. In the US, trust codes have been enacted in several States, and some attempts were made to have a uniform codification of parts of the trust law; see Bogert, *Trusts*, Sect. 7. The only comprehensive, yet private, initiative to codify American trust law was made by the American Law Institute, with its Restatement of the American Law of Trust, first compiled in 1935 and revised in 1957 (Restatement of Trust, Second; hereinafter referred to as 1957 US Second Restatement of Trust).

(30) The old controversy with respect to the very definition of trust is but an illustration of the complexity of the institution itself; for a review of the most common definitions of trust, see *Parker & Mellows: The Modern Law of Trusts*, 7. See also the 'compiled' definition proposed by Pettit, *Equity and the Law of Trusts*, *supra* n. 28, at 22.

«[T]he term 'trust' refers to the legal relationships created *-inter vivos* or on death- by a person, the settlor, when assets have been placed under the control of a trustee for the benefit of a beneficiary or for a specified purpose. A trust has the following characteristics - *a* the assets constitute a separate fund and are not part of the trustee's own estate; *b* title to the trust assets stands in the name of the trustee or in the name of another person on behalf of the trustee; *c* the trustee has the power and the duty, in respect of which he is accountable, to manage, employ or dispose of the assets in accordance with the terms of the trust and the special duties imposed upon him by law.»

The trust thus refers to a form of property holding, purported to conciliate successive (essentially patrimonial) interests and built upon the dissociation between legal title and beneficial or equitable title over a same property⁽³²⁾. The dissociation of interests (a) ensures a disinterested management of the trust, freed from any personal interests of the person or entity in charge; and (b) allows the creation of equitable beneficial interests recognised and protected by law, without complicating the legal title to the element in trust⁽³³⁾.

The trustee, as the 'holder of property belonging beneficially to others'⁽³⁴⁾, is vested with the authority necessary to maintain and advance the trust *res*, including that of selling and mortgaging the property in trust⁽³⁵⁾. On the other hand, the trustee is bound by a number of duties inherent to a proper management of the trust. Apart from the specific duties associated with, or imposed by each particular trust, three substratum duties can be identified⁽³⁶⁾:

(31) Art. 2. The Convention purports to establish common principles between States on the law applicable to trust. The quoted definition does not significantly differ from that given in the 1957 US Second Restatement of Trust, § 2.

(32) Generally on the institution of trust in English law, see *inter alia* Hayton, *Underhill & Hayton: Law Relating to Trusts and Trustees*, 14th edn (Butterworths, 1987) (hereafter referred to after the title); Moffat, *Trusts Law, Text and Materials*, *ibid. supra* n. 29; Oakley, *Parker & Mellows: The Modern Law of Trusts*, 6th edn (Sweet & Maxwell, 1994) (hereafter referred to after title); Pettit, *Equity and the Law of Trusts*, *ibid. supra* n. 28. For a more concise presentation, Fratcher, 'Trust', in *International Encyclopedia of Comparative Law*, Vol. V, Chap. 11 (J.C.B. Mohr, 1972), Sect. 1-100; Redgwell, 'Le concept de *trust* en droit anglais', in Ost & Gutwirth (eds.), *Quel avenir pour le droit de l'environnement ?*, Actes du colloque organisé par le Centre d'étude du droit de l'environnement et le *Centrum interactie recht en technologie* (Facultés Universitaires Saint-Louis, 1996), 211.

(33) *Hanbury & Maudsley: Modern Equity*, 42.

(34) Moffat, *Trusts Law, Text and Materials*, *supra* n. 29, 316.

(35) Trustee Act 1925, Part II; more extensive powers can be conferred by the terms of the trust; Moffat, *Trusts Law, Text and Materials*, *supra* n. 29, 321 *et sequ.*; *Parker & Mellows: The Modern Law of Trusts*, Chap. 12; Pettit, *Equity and the Law of Trusts*, *supra* n. 28, Chap. 17; *Snell's Principles of Equity*, Chap. 8; *Underhill & Hayton: Law Relating to Trusts and Trustees*, Chap. 12. See also the 1957 US Second Restatement of Trust, §§ 186-196

(36) Moffat, *Trusts Law, Text and Materials*, *supra* n. 29, 316 *et sequ.*; *Parker & Mellows: The Modern Law of Trusts*, Chap. 12; Pettit, *Equity and the Law of Trusts*, *supra* n. 28, Chap. 17; *Snell's Principles of Equity*, Chap. 7; *Underhill & Hayton: Law Relating to Trusts and Trustees*, Chap. 11.

- 1) Personal execution of the functions of trustee⁽³⁷⁾;
- 2) Management of the trust for the sole benefit of the beneficiary, without the influence of a prospective personal profit. This 'fiduciary dimension' of the trust precludes the trustee «to put himself in a position where his interest and duty conflict»⁽³⁸⁾;
- 3) Honesty, loyalty, and standards of skill and prudence that can be expected from a reasonable person in the management of his own affairs⁽³⁹⁾.

The beneficial interest varies according to the subject matter and nature of the trust⁽⁴⁰⁾, and is to be specified, with a sufficient degree of certainty, in the trust agreement⁽⁴¹⁾.

The planetary trust theory draws more particularly upon charitable trust⁽⁴²⁾, which is a special form of trust set up «for the benefit of large and changing groups of people,

(37) The trust deed being based upon a particular relationship of confidence existing between the settlor and the trustee, the latter is not allowed to delegate his functions; *Parker & Mellows: The Modern Law of Trusts*, Chap. 13. See also 1957 US the Second Restatement of Trust, § 171.

(38) *Bray v. Ford*, [1896] AC 44, at 51-52; relevant extracts in Moffat, *Trusts Law, Text and Materials*, *supra* n. 29, at 545. See also 1957 the US Second Restatement of Trust, § 170.

(39) *Snell's Principles of Equity*, 212, refers to the duty of 'utmost diligence' or 'exacta diligentia' of the trustee in the performance of his duties and exercise of powers. Also the 1957 US Second Restatement of Trust, § 174.

(40) Where the trust is 'fixed', the beneficial interest is also fixed, whilst it is essentially variable in case of discretionary trust; see *Hanbury & Maudsley: Modern Equity*, 199; also the 1957 US Second Restatement of Trust, § 128.

(41) The requirement of the certainty of the subject matter also implies the clear identification of the property in trust. On the three *certainties*, mentioned below in the text, required for a trust to be valid. See also the 1957 US Second Restatement of Trust, § 74.

(42) The public trust doctrine is also commonly referred to at the national level, and more particularly in the US, as a 'repository for substantive principles that provide guidance regarding how conflicts in ocean and coastal areas should be resolved'; Van Dyke, 'The Rio Principles and our Responsibilities of Ocean Stewardship', 31 *OCM* (1996), 1, at 15. The Roman and Common law theory was revived by Sax's leading and widely commented analysis entitled 'The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention', 68 *Michigan LR* (1969-1970), 471; see also Delgado, 'Our Better Natures: A Revisionist View of Joseph Sax's Public Trust Theory of Environmental Protection, and Some Dark Thoughts on the Possibility of Law Reform', 44 *Vanderbilt LR* (1991), 1209; Redgwell, 'Le concept de *trust en droit anglais*', *supra* n. 32, 224 *et sequ.* Originally restrictively applied to the traditional uses of navigation, commerce and fishing, the doctrine was expanded in the 1960s, to encompass wider uses, such as purely recreational uses, protection and conservation; it emerged more recently as a resource planning and management tool. According to that theory, the State acts as a trustee with regard to certain common properties, such as shorelands, parklands, navigable waters, and non-renewable resources, hence manage and protect them for the use and benefit of the public at large; Archer & Casey Jarman, 'Sovereign Rights & Responsibilities: Applying Public Trust Principles to the Management of EEZ Space and Resources', 17 *OCM* (1992), 253. Despite the fact that the public trust doctrine draws its origins in the trust doctrine, it has evolved separately to the latter, and *inter alia* the potential intergenerational dimension of the public trust were less exploited, if at all. The public trust doctrine is therefore not particularly considered here, although it could constitute a more realistic and viable alternative to the planetary trust doctrine, at least as far as the protection of environmental resources under domestic jurisdiction is concerned; see Archer & Casey Jarman, *ibid.*; Nanda, & Ris, 'The Public Trust Doctrine: A Viable Approach to International Environmental Protection', 5 *Ecology LQ* (continued)

or to carry out certain exclusively charitable purposes which are beneficial to the community at large»⁽⁴³⁾. With no statutory definition provided of the 'charitable purposes' attached to charitable trusts, reference is often made to Lord Macnaghten's four-fold classification:

«'Charity' in its legal sense comprises four principal divisions: trusts for the relief of poverty; trusts for the advancement of education; trusts for the advancement of religion; and trusts for other purposes beneficial to the community, not falling under any of the preceding heads. »⁽⁴⁴⁾

Lord Macnaghten's residuary class has been interpreted as encompassing trusts for environmental purposes⁽⁴⁵⁾.

The charitable trust presents three major advantages compared with the private trust:

- 1) Its validity is not conditional upon the adequate certainty of the persons intended to benefit from the trust (rule of certainty of object)⁽⁴⁶⁾, so long as the charitable purpose of the trust is sufficiently clearly set out⁽⁴⁷⁾. It also means that, whilst the private trust can be enforced by the beneficiaries, it rests upon a specially appointed guardian to ensure the enforcement of the charitable trust⁽⁴⁸⁾.
- 2) It can be set up for a perpetual or indefinite duration⁽⁴⁹⁾.

(1975/76), 291. It is interesting to note that the project of codification of the Swiss torts law embraces the so far unknown public trust concept, that would allow not only public authorities, but also environmental groups, to claim compensation for the prevention, reparation and compensation costs from the polluter; see *Revision Haftpflichtrecht, Vorentwurf*, drafted by P. Widmer & P.A. Wessner, 18 December 1996. I am indebted to Prof. Wessner for providing with a copy of the draft bill.

(43) *Snell's Principles of Equity*, 145. Generally on charitable trusts, see *Hanbury & Maudsley: Modern Equity*, Chap. 15; Moffat, *Trusts Law, Text and Materials*, *supra* n. 29, Chap. 17 to 19; *Parker & Mellows: The Modern Law of Trusts*, Chap. 9; Pettit, *Equity and the Law of Trusts*, *supra* n. 28, Chap. 9. Also the 1957 US Second Restatement of Trust, Chap. 11 (§§ 384 *et sequ.*)

(44) *Commissioners of Income v. Pemsel*, [1891] AC 531, at 583, relevant extracts in *Snell's Principles of Equity*, 148. The 1957 US Second Restatement of Trust, § 368, echoes word per word the above classification to which it adds two more charitable purposes, namely promotion of health, and governmental and municipal purposes.

(45) Moffat, *Trusts Law, Text and Materials*, *supra* n. 29, 663; *Parker & Mellows: The Modern Law of Trusts*, 333; Redgwell, 'Le concept de *trust* en droit anglais', *supra* n. 32, 217 *et sequ.* See equally the 1957 US Second Restatement of Trust, § 374, comment.

(46) See the 1957 US Second Restatement of Trust, § 112; on the contrary, the Restatement considers that «a trust is not a charitable trust if the persons who are set to benefit are not of a sufficiently large or indefinite class so that the community is interested in the enforcement of the trust»; *ibid.* § 375.

(47) Moffat, *Trusts Law, Text and Materials*, *supra* n. 29, 628 *et sequ.*; Pettit, *Equity and the Law of Trusts*, *supra* n. 28, Chap. 13; *Snell's Principles of Equity*, 145 *et sequ.*

(48) In England, the Attorney General, acting as representative of the Crown, is appointed guardian of all charitable trusts; Redgwell, 'Le concept de *trust* en droit anglais', *supra* n. 32, 215 *et sequ.*

(49) The capital in trust only is exempted from the rule against perpetuities; time limits are imposed in private as in charitable trusts on the accumulation of the income of the trust; Moffat, *Trusts Law, Text and Materials*, *supra* n. 29, 230. See the 1957 US Second Restatement of Trust, §§ 65b and 112.

3) In case of objective impossibility to fulfil the original purpose of the trust, the charitable trust avoids the doctrine of lapse; its fund can be affected again to a similar charitable purpose (cy-près rule)⁽⁵⁰⁾.

The duties of the trustee do not differ substantially under a private or charitable trust⁽⁵¹⁾, and his powers are limited to those expressly provided for in the terms of the trust in addition to those necessary or appropriate to carry out the purpose of the trust⁽⁵²⁾.

ii. Elements of a Planetary Trust

The Planetary trust, like the domestic institution it is modelled upon, is based on considerations of both spatial and temporal equity⁽⁵³⁾. By contrast with equity in Common law systems, equity in international law does not, in principle⁽⁵⁴⁾, constitute a source of law distinct from conventional or customary law. Rather, it is an integral part of that law, and inspires the judge when dispensing justice and declaring law «on a foundation of very general precepts of justice and good faith»⁽⁵⁵⁾. The importance of equity in the allocation of natural resources was emphasised by Judge Dillard, as «particularly relevant when the issues focus on the common use of limited resources and the applicable norm of international law is couched in the form of a 'standard'»⁽⁵⁶⁾.

The analogy between the proposed planetary trust and the domestic institution outlined above is particularly clearly reflected in the statement that «the present

(50) Moffat, *Trusts Law, Text and Materials*, supra n. 29, 230. Also the 1957 US Second Restatement of Trust, § 399.

(51) See the 1957 US Second Restatement of Trust, § 379.

(52) See the 1957 US Second Restatement of Trust, § 380.

(53) *In Fairness to Future Generations*; see also *Maritime Delimitation in the Area between Greenland and Jan Mayen, Judgment*, ICJ Rep. 1993, 38, Judge Weeramantry (sep. op.), at Paras. 242.

(54) See 1945 Statute of the International Court of Justice, Art. 38(2), decision *ex aequo et bono* with the consent of the parties to the dispute.

(55) *North Sea Continental Shelf, Judgment*, ICJ Rep. 1969, 3, at Para. 85. See also *The Diversion of Water from the Meuse, PCIJ Ser. A/B*, Fascicule No 70, Judgment of June 28th, 1937, Judge Huckson (sep.op.), at 76-77. For an extensive review of the role of equity in the decision-making of the ICJ, see *Maritime Delimitation in the Area between Greenland and Jan Mayen, Judgment*, ICJ Rep. 1993, 38, Judge Weeramantry (sep. op.). See also Weil, 'Towards Relative Normativity in International Law?' 77 *AJIL* (1983), 413.

(56) *Fisheries Jurisdiction (United Kingdom v. Iceland, Federal Republic of Germany v. Iceland)*, Merits, ICJ Rep. 1974, 3, Judge Dillard (sep.op.), at 64, n. 1. See also ICJ judgement, Paras. 48-50.

generation holds legal title to the resources of the trust, while future generations, together with the present generation, share the equitable title...»⁽⁵⁷⁾.

a. Framework Criteria

To facilitate a definition of the terms of the planetary trust within the limits of equity and fairness, the following four framework criteria are generally suggested⁽⁵⁸⁾:

- 1) The leading criterion is that of equity between generations; it commands (a) the burden placed upon the present generation to be commensurate with the indeterminate future needs and interests, and conversely (b) the cost of the choices of the present generation must not be borne disproportionately by future generations. Anticipating the critique that intergenerational equity is biased in favour of (future) environment, against (immediate) development⁽⁵⁹⁾, Brown Weiss affirms that both present and future generations are beneficiaries of the trust, thereby putting the needs and interests of all generations on the same level⁽⁶⁰⁾, and that inter- and

(57) 'The Planetary Trust: Conservation and Intergenerational Equity', at 499, n. 15.

(58) *Supra* n.57, at 525 *et sequ.*

(59) A classic argument against the planetary trust theory is that «survival until next week is more important than the survival of the next generation»; MacNeill, 'Sustainable Development, Meeting the Growth Imperative for the 21st Century', in Angell *et al.* (eds.), *Sustaining Earth: Response to the Environmental Threat* (Macmillan, 1990), Chap. 17, at 175; the same remark was contained in IUCN/WWF/UNEP, *Sustaining the Earth* (IUCN/WWF/UNEP, 1990), at 175. Gündling, albeit rather supportive of Brown Weiss theory, recognises that «[t]he most difficult challenge to all efforts to define and achieve 'intergenerational equity' will turn out to be that we have failed to achieve equity within our own generation»; 'Our Responsibility to Future Generations', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 206, at 211; in the same sense, Boyle notes that «it is already an intractable task to reconcile the environmental interests of those here and now in a weak international legal political system, without also embracing the interests of the future»; *Review of In Fairness To Future Generations*, 40 *ICLQ* (1991), 230.

(60) In this respect, Brown Weiss' definition of the purpose of the planetary trust as «to sustain the welfare of future generations» is perplexing; *supra* n.57, at 523. Although the vast majority of documents referring to intergenerational equity relate it to the benefit of present and future generations, certain mention expressly only future generations; hence for instance, the 1946 International Convention for the Regulation of Whaling only recognises «... the interest of the nations of the world in safeguarding for future generations the great natural resources represented by the whales...» (preambular Para. 1). Likewise, the States party to the 1972 World Heritage acknowledge that «... the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage...» belongs primarily to the host State (Art. 4). The 1979 Bonn Convention on the Conservation of Migratory Species uses a similar wording and states that «...each generation of man holds the resources of the earth for future generations and has an obligation to ensure that this legacy is conserved and, where utilized, is used widely» (preambular Para. 2).

intragenerational are interrelated, indeed interdependent⁽⁶¹⁾. She also undermines the risk of potential conflicts between the needs of successive generations, and assumes that as a rule, «the actions to meet the basic needs of the present generation and future generations are the same»⁽⁶²⁾.

- 2) A second criterion pertains to the preservation of sufficient flexibility for future generations to define and achieve their own goals and values. Due consideration for the interests and needs of future generations does not imply the prediction, by the present generation, of the values of future generations⁽⁶³⁾. In theory, the planetary obligations and related rights are not commensurate with anticipated *future* subjective needs; they are determined according to the objective standard referring to the existing *past*, of 'an environment in no worse condition than originally received'⁽⁶⁴⁾.
- 3) In addition, the planetary trust must not strive at imposing universal standards; it is to be constructed in such a way as to reflect the various cultures, traditions, social, political and cultural systems.
- 4) Finally, despite the inherent uncertainty pertaining to the very object and subject matters of the planetary trust, the rights and obligations flowing from the trust must be reasonably foreseeable and their content sufficiently clear, in accordance with the principles of accessibility and foreseeability of the law.

b. Basic Principles

Brown Weiss identifies three framework principles of a planetary trust ⁽⁶⁵⁾ in the light of the criteria mentioned above, namely:

- 1) The conservation of options, *viz.* the conservation of the diversity of the natural resource base, so as not pre-empt or constrict the environmental options of future generations;

(61) Brown Weiss, 'Our Rights and Obligations to Future Generations for the Environment', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 198, 201 *et sequ.*

(62) Brown Weiss, 'Intergenerational Fairness for Fresh Water Resources', 25 *EPL* (1995), 231, at 233; for a criticism of this assumption, see *infra*, 3/iii. Operational Implications of a Planetary Trust.

(63) *Supra*. n.57, at 526; also Brown Weiss, 'Intergenerational Equity: Towards International Legal Framework', in Choucri (ed.), *Global Accord: Environmental Challenges and International Responses* (MIT, 1993), Chap. 10, at 343.

(64) *Infra.*, b. Basic Principles (conservation of quality).

(65) 'The Planetary Trust: Conservation and Intergenerational Equity', at 525 *et sequ.*; *In Fairness to Future Generations*, 34 *et sequ.*

2) The conservation of quality, *viz.* the preservation of the planet in no worse conditions than originally received. Brown Weiss makes it clear, however, that the preservation of quality does not mean that the *environment* must remain unchanged; rather, it signifies that *the situation of future generations* with regard to the environment must be similar to the 'original' position of the present generation, either in terms of environmental quality or diversity, or in terms of both financial and technological capacity to achieve such quality or diversity.

«We may exhaust more reserves of a natural resource and cause modest levels of pollution, but pass a higher level of income, capital and knowledge sufficient to enable future generations to develop substitutes for the depleted resources and methods for abating or removing pollutants.»⁽⁶⁶⁾

3) The conservation of access, *viz.* the maintenance of a 'reasonable and non discriminatory right of access' to natural resources to both present and future generations⁽⁶⁷⁾.

c. Planetary Rights and Obligations

The above principles are more concretely spelled out in terms of fiduciary rights and obligations. Both rights and obligations are construed in collective terms, hence imposed upon, or attributed, to present or future generations as a whole rather than vested in individual members⁽⁶⁸⁾. The planetary duties (duties of use) that rest upon the present generation in its capacity of trustee can be classified in five generic categories⁽⁶⁹⁾, namely

⁽⁶⁶⁾ *In Fairness to Future Generations*, 43; also Young, *For Our Children's Children: Some Practical Implications of Inter-Generational Equity and the Precautionary Principle*, Resource Assessment Commission Occasional Publication No. 6 (Australian Government Publishing Service, 1993), 8 *et sequ.* Young is already more detailed in his consideration of what he calls the 'maintenance of natural capital rule', and suggests (economic) ways of calculating the standards of proof.

⁽⁶⁷⁾ This last criterion, albeit implicit, was not expressly mentioned in Brown Weiss earliest presentation of the planetary trust theory; it was an addendum of *In Fairness to Future Generations*, 43.

⁽⁶⁸⁾ *In Fairness to Future Generations*, at 98.

⁽⁶⁹⁾ Planetary duties are not elaborated upon here, as it is argued later in the thesis that they add nothing or little to existing environmental obligations in general, or as related to particular sectors of environmental law; see *infra* iv. Pertinence of the Planetary Trust Theory to Preserve a Certain Quality Environment. For a more detailed picture of the various duties, see *In Fairness to Future Generations*, Chap. III; for a more specific consideration of these duties with respect of diverse environmental issues (nuclear wastes, biodiversity, and renewable resources), *ibid.* Part II. See also Berkovitz, 'Pariahs and Prophets: Nuclear Energy, Global Warming, and Intergenerational Justice', 17 *Columbia JEL* (1992), 245; Redgwell, 'Intergenerational Equity and Global Warming', in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 3, at 51 *et sequ.*; Redgwell, 'Energy and Environment: From State Sovereignty to National/International Stewardship?', Conference Paper, Aberdeen, 1996, manuscript Sect. VI; Yamin, *Principles of Equity in International Environmental Agreements with Special Reference to the Climate Change Convention* (FIELD Working Paper, 1994), at 35-36.

(1) the duty to take positive steps to conserve natural resources; (2) the duty to ensure equitable access to the use and benefit of natural resources; (3) the duty to prevent and mitigate adverse impacts on natural resources and environmental quality; (4) the duty to minimise disasters and provide emergency assistance; and (5) the duty to bear the cleaning and restoration costs of environmental damage.

'Utilisation rights' correspond to the duties of use and secure each generation with a right «to receive the planet in no worse condition than that of the previous generation, to inherit comparable diversity in the natural and cultural resource bases, and to have equitable access to the use and benefits of the legacy»⁽⁷⁰⁾. Notwithstanding the inherent uncertainty and indeterminacy of the planetary rights, Brown Weiss dismisses the theory of 'absolute' planetary obligations, *viz.* obligations existing independently of corresponding rights⁽⁷¹⁾, and stresses on the contrary the vital importance of planetary rights against the temptation of present generation «to bias the definition [of planetary rights] in favour of itself at the expense of future generations. Intergenerational rights have greater moral force than do obligations»⁽⁷²⁾. On other hand, quite surprisingly, the Brown Weiss leaves it to each generation «the responsibility to set the criteria for

⁽⁷⁰⁾ *In Fairness to Future Generations*, 95; see further *ibid.*, Chap. IV.

⁽⁷¹⁾ This point raises the vexed question of the correlativity of rights and obligations, which is the object of a old (apparently endless) debate in the doctrine. The debate relates to the question of legal rights necessarily implying legal duties as much as to the necessary inference of legal rights from legal duties. With regard to the former dimension of the correlation, Brown Weiss takes side with Ago, Donnelly, Dworkin, and Raz and argues that «a right (...) is always associated with a duty or obligation. If a person has a right, he or she has an interest that is sufficient ground for holding another subject to a duty»; *In Fairness to Future Generations*, 99. See also Ago, *infra*; Donnelly, 'How Are Rights and Duties Correlative?', 16 *Journal of Value Inquiry* (1982), 287; Raz, 'Legal Rights', 4 *Oxford Journal of Legal Studies* (1984), 1. Dworkin cautiously distinguishes between *right* in the strong sense, *viz.* legal entitlement, and *rightness*, in the sense 'right thing for a person to do'; *Taking Rights Seriously*, revised edn, (Duckworth, 1978), Chap. 7. Lyons on the other hand, contends that some, but not all, rights have correlative obligations; 'The Correlativity of Rights and Duties', 4 *Noûs* (1970), 45.

Brown Weiss however, apparently dissents from Ago's view that in international law «the correlation between a *legal* obligation on the one hand and a subjective right on the other admits no exception; as distinct from what is said to be the situation in municipal law, there are certainly no obligations incumbent on a subject which are not matched an international subjective right of another subject or even (...) of the totality of the other subjects of the law of nations»; 1970 *YbILC* Vol. II, Pt. 1, at 192-193. On the contrary, she follows the Kelsen argument that not all obligations entail rights, mentioning for instance the purely moral obligations. Her dissent might yet be purely apparent, as such moral obligation does probably not qualify as legal obligations in the sense understood by Ago. This also means that Brown Weiss considers planetary obligations as genuine legal obligations and not merely moral commitments.

⁽⁷²⁾ 'Our Rights and Obligations to Future Generations for the Environment', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 198, at 204. According to Brown Weiss' theory, not only future but also the present generations would be the holder of planetary rights. Considering that the rights of the present generation have the same weight as those of future generations, the deterrent effect of future generations rights might, to a certain extent, be undermined by the necessity to satisfy present rights too.

defining the action that infringe upon those rights»⁽⁷³⁾, without any substantive guidelines being provided in the balancing of the rights and interests of the (present and future) beneficiaries.

Just as the charitable trust is enforced by a specially appointed guardian of the interests of the trust beneficiaries, so would the planetary trust be enforced by local, regional, national and international ombudsmen acting *proprio motu* as some kind of 'public watchdog', or upon individual complaints from citizens or other States in the same way as the various commissions and committees set up in international and regional human rights mechanisms⁽⁷⁴⁾.

iii. Intergenerational Equity as a Normative Framework for Sustainable Development

In the area of international environmental law, the emergence of intergenerational equity preceded that of sustainable development⁽⁷⁵⁾; it originally reflected essentially environmental concerns, with no particular considerations paid to the developmental needs, more particularly the needs (and constraints) of less developed countries⁽⁷⁶⁾. The association of the two notions results principally from the integration of intergenerational equity as a constitutive component of the classic definition of sustainable development:

⁽⁷³⁾ *In Fairness to Future Generations*, 104.

⁽⁷⁴⁾ 'The Planetary Trust: Conservation and Intergenerational Equity', 572 *et sequ.* Brown Weiss proposes also other strategies for implementing the planetary trust, namely (a) the establishment of a global network to monitor the diversity of the natural heritage; (b) the setting of a program of scientific research and development; (c) a trust fund for future generations to insure against the effects of particular hazardous activities.

⁽⁷⁵⁾ Brown Weiss' earlier contributions on planetary trust make only few references to sustainable development, then arguably not yet popularised by WCED's *Our Common Future*; sustainable economic development is mentioned once in 'The Planetary Trust: Conservation and Intergenerational Equity', 540. Often stressed on the other hand, is the necessity to sustain a healthy and decent environment.

⁽⁷⁶⁾ Although this aspect would be a matter of intragenerational equity, which Brown Weiss has expressly reserved for separate consideration; 'The Planetary Trust: Conservation and Intergenerational Equity', 499, n.15. The intragenerational dimension of equity was more particularly considered in *Fairness to Future Generations*; see for instance 157 *et sequ.* (debt for conservation swap); 222 *et sequ.* (depletion of forestry resources); 239 *et sequ.* (water resources); 250 *et sequ.* (soil management); see also frequent references to sustainable development throughout the book (see index). The intragenerational dimension was further developed in 'International Environmental Law: Contemporary Issues and the Emergence of a New World Order', 81 *Georgetown LJ* (1993), 676, and subsequent related articles; see 'Environmental Equity: the Imperative for the Twenty-First Century', in Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, 1995), Chap. 3; 'Environmental Equity and International Law', in UNEP (ed.), *UNEP's New Way Forward: Environmental Law and Sustainable* (UNEP, 1995), Chap. 2. Brown Weiss' considerations on intragenerational equity are addressed more particularly in partnership, *infra* Chap. 5, Principle of Partnership (especially Common But Differentiated Responsibility).

«Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and
- the idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet present and future needs.»⁽⁷⁷⁾

In the light of the above definition, Brown Weiss maintains that the commitment which countries made to sustainable development is inherently intergenerational⁽⁷⁸⁾. She argues further that the recognition of a binding commitment to intergenerational equity, which she concedes is still based essentially on a moral sense of *noblesse oblige*⁽⁷⁹⁾, would confer a firm philosophical and legal basis to sustainable development⁽⁸⁰⁾.

⁽⁷⁷⁾ Report of the World Commission on Environment & Development, *Our Common Future* (Oxford University Press, 1987), at 43. See also similar definition of sustainable development *inter alia* in 1992 OSPAR Marine Environment Convention, Preambular Para. 3; 1992 Biodiversity Convention, Art. 3 *in fine*; 1990 Bergen Ministerial Declaration on Sustainable Development, introductory Para.

Reference to future generations is equally contained in previous and subsequent reports implicitly or explicitly endorsing sustainable development; hence the Independent Commission on International Development Issues (Brandt Commission), the Commission appointed by the United Nations in the late 1970s to study the development dimension of the world crisis, concluded *inter alia* that « (...) that the growth and development of the world economy must be in the future less destructive to natural resources and the environment so that the rights of future generations are protected»; *North-South: A Programme for Survival* (Pan Books, 1980), 115. Likewise, the South Commission formally established in 1987 to analyse the problems faced duly emphasised that «[t]he challenge to the South is to pursue its development with due concern for the protection of the natural environment so that it may sustain the present and future generations», stressing further that «[t]he South must not shirk its [environmental] responsibilities towards future generations»; *The Challenge to the South* (Oxford University Press, 1990), 23 and 280. More recently, the Commission on Global Governance warned that «[i]ncreasing population and economic growth have placed additional pressure on natural resources and the environment, and the management of both demographic and economic change to safeguard the interests of future generations has become an issue of paramount importance»; *Our Global Neighbourhood* (Oxford University Press, 1995), 27. Among many other instances, one should mention perhaps that Brown Weiss' theory was endorsed 'en bloc' by the UN Experts Group on the Identification of the Principles International Law for Sustainable Development, convened in Geneva, 26-28 September 1995, under the chairmanship of Brown Weiss herself; see Report of the meeting, Paras. 41 *et sequ.* The Report is posted on the UN Website @ [gopher://gopher.un.org/00/ESC/CN17/1996/background/law.txt].

⁽⁷⁸⁾ 'Intergenerational Fairness for Fresh Water Resources', 25 *EPL* (1995), 231; also 'Environmental Equity and International Law', in UNEP (ed.), *UNEP's New Way Forward: Environmental Law and Sustainable* (UNEP, 1995), Chap. 2, at 13. See in the same sense Singh, 'Sustainable Development as a Principle of International Law', in de Waart *et al.* (ed.), *International Law and Development* (Martinus Nijhoff, 1988), Chap. 1.1.

⁽⁷⁹⁾ See *infra* i. Moral Foundations for Planetary Rights and Obligations: the Moral Sense of Obligations to Future Generations.

⁽⁸⁰⁾ In the same sense, Redgwell considers that intergenerational equity is the 'international legal articulation' of the principle of sustainable development; 'Intergenerational Equity and Global Warming', in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 3, at 42.

As underlined in the introduction to this Chapter, intergenerational equity is referred to in the great majority of documents, treaties or declarations negotiated and adopted on the eve and in the aftermath of the 1992 Rio Conference on Development and Environment⁽⁸¹⁾; it is yet unclear what value to attribute to such references. On the one hand, they could be understood as enhancing further the moral grounds of the various measures and principles imposed for the sake of 'sustainable development'. It may also be interpreted as a source of autonomous rights and obligations, or as a supplementary legal basis to sustainable development.

3. Major Shortcomings of the Planetary Trust Theory

Attractive for the simplicity of its content, the high morality of its spirit and the nobility of its purpose, the planetary trust theory suffers nonetheless major drawbacks that genuinely undermine its potential qualification as a source of legal planetary rights and obligations in the area of the protection of the environment⁽⁸²⁾.

It is first very important to draw a clear distinction between:

- (a) the concept of *intergenerational equity*, which the tenants of the planetary trust theory consider deeply anchored in our moral values and well-embedded in international law;
- (b) the more concrete intergenerational binding commitments, expressed in terms of *planetary rights* and *obligations*. Such rights and obligations are built upon the inherent and solid sense of equity towards future generations, and are usually considered as primarily moral obligations 'in the formative stage of becoming legal rights and obligations', the transposition of which into normative obligations 'still needs to be done'⁽⁸³⁾.

(81) Whilst reference to intergenerational equity remains occasional in early environmental law documents, it is nearly systematic in documents adopted since the beginning of the 1990s; see documents *supra* n. 6 and 7.

(82) Brown Weiss did not *a priori* exclude the application of the planetary trust theory to other areas of law.

(83) *In Fairness to Future Generations*, 26, 30 and 103; 'Our Rights and Obligations to Future Generations for the Environment', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 198, 200; also Redgwell, *supra* n. 80, at 47. Likewise, Weeramantry qualifies the principle of intergenerational equity as an 'important and rapidly developing principle of contemporary environmental law'; *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*, *ICJ Rep. 1995*, 288, Weeramantry (dis.op.), at 341. On the other hand, the further implications of the equitable principles which the trustee is expected to respect, «are equitable principles stressed by those traditions - principles whose further implications have yet to be woven into the fabric of international law»; *Maritime Delimitation in the Area between Greenland and Jan Mayen, Judgment*, *ICJ Rep. 1993*, 38, Weeramantry (sep.op.), Para. 240 (n. omitted). Less than three year later however, Judge Weeramantry appears convinced that the crystallisation has taken place and note (*continued*)

The next two paragraphs focus on the assumption of an 'inherent and solid sense of equity' towards future generations allegedly 'deeply anchored in our moral values', and 'well-embedded in international law' lying at the heart of the planetary trust theory. The last paragraph considers more particularly the lack of determinacy of planetary rights and obligations.

i. Moral Foundations for Planetary Rights and Obligations: the Moral Sense of Obligations to Future Generations

The whole theory of a planetary trust is based upon the fundamental postulate that intergenerational equity in general, and more particularly the protection of the natural and cultural heritage for future generations, «is deeply rooted in human behaviour and in religious and cultural norms of communities; it is expressed in basic political documents»⁽⁸⁴⁾; «[t]he concern [for future generations] reflects a deeply held value which society wants to protect»⁽⁸⁵⁾.

This postulate is disputable. However desirable a deeply anchored sense of concern for our posterity might be, history in the past few centuries hardly provides concurring evidence of our possessing such noble sense of responsibility. On the contrary, in Brown Weiss' own words:

«[O]ur natural instincts are self-indulgent. We have desecrated environments, wasted resources and slaughtered animals purely for pleasure or for modest personal gain. It may be that the human species carries both a selfish gene and an altruistic one (...) but it is hardly sufficient to rely on the

that, at least in the context of the use nuclear weaponry, « the rights of future generations have passed the stage when they were merely an embryonic right struggling for recognition. They have woven themselves into international law through major treaties, through juristic opinion and through general principles of law recognized by civilized nations. [All the treaties that expressly incorporate the principle of protecting the natural resources for future generations] elevate the concept to the level of binding state obligation»; *Legality of the Use by a State of Nuclear Weapons in Armed Conflict, Advisory Opinion, ICJ Rep. 1996*, 66, Weeramantry (dis.op.), point II (3)(b)).

(84) 'The Planetary Trust: Conservation and Intergenerational Equity', 500.

(85) Brown Weiss, 'Intergenerational Justice and Intergenerational Law', in Busuttil *et al.* (eds.), *Our Responsibilities Towards Future Generations, A Programme of UNESCO and the International Environment Institute* (Foundation for International Studies & UNESCO, 1990), 95. Our moral obligation to 'our descendants and to other creatures' to 'act prudently' with regard to the environment heritage was also recognised *Inter alia* in IUCN/UNEP/WWF, *World Conservation Strategy* (IUCN/UNEP/WWF, 1980), Chap. 3, Para. 2 One should also note that in Hungary invoked *inter alia* the preservation of species for future generations as a moral obligation in the context of the *Gabcikovo-Nagymaros* dispute that opposes it to the Slovak Federation; see Hungary Declaration, 32 *ILM* (1993), 1247. The Court merely reported the argument and mentioned future generations in relation to sustainable development without further elaboration; see *Case concerning the Gabcikovo-Nagymaros Project (Hungary/Slovakia), Judgment*, 25 September 1997, 37 *ILM* (1998), 162, at Para. 140.

generous gene to build a theory of morality to overcome the selfish genes, without more.»⁽⁸⁶⁾

The recognition of moral obligations to our posterity is not only disputable in the light of the behaviour of this and the precedent generations, as displaying little consideration for future needs and interests; the existence of *moral* duties and responsibilities to future generations is far from being settled even at the philosophical level.

The philosophical debate on intergenerational equity started in the mid 1970s⁽⁸⁷⁾, essentially in relation to the problem of population control⁽⁸⁸⁾. It revolves around three main issues, namely:

(1) the identification of future peoples (contingency issue), and the possible contradiction between the obligation to take certain measures to ensure the well-being of future generations and the rights of future generations to exist (quality of existence *versus* existence dilemma)⁽⁸⁹⁾;

⁽⁸⁶⁾ 'Our Rights and Obligations to Future Generations for the Environment', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 198, at 207 (n. omitted).

⁽⁸⁷⁾ Although one could perhaps find the first 'roots' of such debate in the fourth century BC Aristotelian conception of distributive justice, developed in *Nicomachean Ethics*, and Rawls' *Theory of Justice*, it is important to note that both theories concentrate upon justice between living people and neither particularly develop a potential intergenerational dimension; Aristote, *Ethique à Nicomaque*, Trad. Barthélemy Saint-Hilaire, (Livre de Poche, 1992), Livre V, Chap. III; Rawls, *A Theory of Justice* (Oxford University Press, 1973), more particularly Paras. 24 and 44. Rawls dedicates one paragraph to the problem of justice between generation (Para. 44), without elaborating it much however, considering that his conception of Justice based upon principles decided by his 'ideal observers' *inter alia* unaware of which generation they belong to, would secure the interests of present and future generation alike. The intergenerational dimension of Rawls' theory has been more particularly exploited by other authors; see Norton, 'Intergenerational Equity and Environmental Decisions: A Model Using Rawls' Veil of Ignorance', 1 *Ecological Economics* (1989), 137. Also Brown Weiss' reference to the just saving principle in 'The Planetary Trust: Conservation and Intergenerational Equity', 532, n.179; see *infra* iii. Operational Implications of a Planetary Trust.

⁽⁸⁸⁾ *Supra*, n.4.

⁽⁸⁹⁾ Or put otherwise, «could the loss in the *quality* of people's lives be outweighed by a sufficient increase in the *quantity* of worthwhile life lived ?»; Parfit, 'Overpopulation and the Quality of Life', in Singer (ed.), *Applied Ethics* (Oxford University Press, 1985), Chap. X, at 147 *et sequ.*; Sikora, 'Is It Wrong to Prevent the Existence of Future Generations?', in Sikora & Barry (eds.), *Obligations to Future Generations* (Temple University Press, 1978), 112; Warren, 'Do Potential People Have Moral Rights?', Sikora & Barry (eds.), *ibid.*, 14; see also D'Amato, 'Do We Owe a Duty to Future Generations to Preserve the Global Environment?', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 190. D'Amato's contribution is a particularly clear illustration of the tendency of legal scholars to resort, on this issue, to philosophical rather than legal arguments both to support or attack the theory of intergenerational equity.

(2) the moral or affective nature of obligations to future generations, and related time-limit to such obligations⁽⁹⁰⁾;

(3) the balancing of the needs of the present generation with needs of future generations, in the light of the non-reciprocity of our concern to future generations⁽⁹¹⁾.

Without entering the heart of the philosophical debate⁽⁹²⁾, the factual evidence of human beings' self-indulgence and the existence of a philosophical controversy seriously undermine the allegation that a sense of intergenerational equity inhere in men's nature and fundamental morality.

ii. Legal Basis for a Planetary Trust: Intergenerational Equity as a Fundamental Principle Deeply Rooted in International Law

The lack of *moral* basis does not necessarily affect the *legal* value of an obligation, in the sense that 'a legal right may not be the giving of legal force to a pre-existing moral right'⁽⁹³⁾. Legal rules and related obligations can obey purely practical considerations⁽⁹⁴⁾

⁽⁹⁰⁾ Moral obligations are usually considered to be owed regardless of time-limit, whilst affective obligations, as the by-product of our bond of love between us and our offspring, are essentially limited to our immediate descendants; Cameron, 'Do Future Generations Matter?', Dower (ed.), *Ethics and Environmental Responsibility* (Adlershot, 1989), Chap. 4; Feinberg, 'The Rights of Animals and Unborn Generations', in Blackstone (ed.), *Philosophy & Environmental Crisis* (University of Georgia Press, 1974), 43.

⁽⁹¹⁾ Issue often summarised in the question 'what will future generations ever do for us?', commonly attributed, albeit without certainty, to Groucho Marx; Young, *For Our Children's Children: Some Practical Implications of Inter-Generational Equity and the Precautionary Principle*, Resource Assessment Commission Occasional Publication No. 6 (Australian Government Publishing Service, 1993), 1, n. 2; Cameron, *ibid. supra* n. 90; Kavka, 'The Futurity Problem', in Sikora & Barry (eds.), *ibid. supra* n. 89, 180; Narveson, 'Future People and Us', *ibid.*, 38.

⁽⁹²⁾ The spectrum of the dissension is particularly well illustrated in the collection of essays edited by Sikora & Barry, *Obligations to Future Generations* (Temple University Press, 1978). For a briefer account of the major theories, see Berkovitz, 'Pariahs and Prophets: Nuclear Energy, Global Warming, and Intergenerational Justice', 17 *Columbia JEL* (1992), 245, at 296 *et sequ.*; Gillespie, *International Environmental Ethics: Value and Methods in International Environmental Law and Policy*, Ph.D. Thesis (Nottingham University, 1994), first part published under the title *International Environmental Law, Policy, and Ethics*, Oxford University Press, 1998), Ph.D. manuscript, 170 *et sequ.*; Pasek, 'Obligations to Future Generations: A Philosophical Note', 20 *World Development* (1992), 513; Agius, 'Towards a Relational Theory of Intergenerational Ethics', in Busuttil *et al.* (eds.), *Our Responsibilities Towards Future Generations, A Programme of UNESCO and the International Environment Institute* (Foundation for International Studies & UNESCO, 1990), 73; Serracino Ingloft, 'The Rights of Future Generations: Some Socio-Philosophical Considerations', *ibid.*, 17.

⁽⁹³⁾ Raz, *supra* n. 71, at 15; approach endorsed by Brown Weiss, *In Fairness to Future Generations*, at 102.

⁽⁹⁴⁾ See for instance international rules in matter of succession of States to treaties and debts, or even more generally, the rules on the law of treaties.

or serve exclusively the self-interest of its subjects⁽⁹⁵⁾. It could thus still be contended that intergenerational equity is deeply anchored in international law regardless of moral conviction. Roots to intergenerational equity in international law can allegedly be found in the references to *mankind* in various legal instruments. Such expressions as 'common heritage', 'common concern' or 'common interest of mankind' in international environmental law⁽⁹⁶⁾, or that of 'humanity', 'human family', or 'peoples' in international human rights law⁽⁹⁷⁾ and general international law⁽⁹⁸⁾ can be assimilated to long-settled precursors «that evidence concern for future generations and establish precepts intended to protect and enhance the welfare of both present and future generations»⁽⁹⁹⁾.

This is not the proper place to discuss the rather contentious assertion that international human rights are directed to the protection of future generations as much as they are to the present generation, and that the human rights provisions referring to children and elderly, to education and training, are 'implicitly temporally oriented'⁽¹⁰⁰⁾.

(95) The importance of States' self interest was particularly illustrated by the negotiation and renegotiation of 1982 UNCLOS Part XI; see *infra* Chap. 5, Principle of Partnership.

(96) For the linking of these expressions to specific regimes environmental, see *infra* Chap. 5, Principle of Partnership.

(97) *In Fairness to Future Generations*, 25 *et sequ.*; 'Our Rights and Obligations to Future Generations for the Environment', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 198, 203 *et sequ.* See for instance the references to mankind and the human family in 1968 Proclamation of Teheran, respectively preambular Para. 7 and operational Para. 2; to human family and all peoples in the 1966 International Covenant on Civil and Political Rights, the 1966 International Covenant on Economic, Social and Cultural Rights, the 1989 Convention on the Rights of the Child common preambular Para. 1; to American peoples and all men, in 1948 American Declaration of Rights and Duties of Man, respectively introductory Para. 1 and preambular Para. 1; and reference to humanity in the context of crimes against humanity, like in the 1948 Convention on the Prevention and Punishment of the Crime of Genocide, the 1973 International Convention on the Suppression and Punishment of the Crime of Apartheid. One should also note the proposal considered at the World Alliance of Reformed Churches general assembly, in Seoul, in August 1989, for enlarging the Universal Declaration of Human Rights to encompass both the rights of future generations, and the rights of nature; proposal reproduced in Vischer (ed.), *Rights of Future Generations Rights of Nature*, Studies from the World Alliance of Reformed No. 19 (World Alliance of Reformed Churches, 1990), 11.

(98) See references *supra* n.4.

(99) 'The Planetary Trust: Conservation and Intergenerational Equity', 542; *In Fairness to Future Generations*, 48.

(100) 'Our Rights and Obligations to Future Generations for the Environment', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 198, at 203. Such assertion is questionable in our sense in that the protection granted to children and elderly flows their particular vulnerability, rather than from the fact that they represent the future or past generations. Human rights mechanisms are, *pre definitionem*, purported to preserve the interests of living individuals (and in limited number of cases groups), including foctuses and dead people, against States' arbitrary. Such conception tends to be confirmed by actual victim-based individual complaint mechanisms set up in the majority of international and regional human rights considered above; on the definition of victim in human rights mechanisms, see *infra* Chap. 6, Principe Pertaining to Public Participation. Brown Weiss' assertion of the 'intergenerational' nature of human rights provision would be (*continued*)

But it is doubtful whether the concepts of common heritage, common concern and common interest of mankind constitute particularly strong precedents of intergenerational equity as a source of international rights and obligations, owing to their disputed legal status, and more importantly to their lack of clearly defined and unanimously agreed substantive content⁽¹⁰¹⁾.

The intergenerational dimension of common heritage of mankind in its original form is not open to question; both scholars⁽¹⁰²⁾ and the earliest legal expressions of the concept⁽¹⁰³⁾ confirm that common heritage encompasses the idea that natural resources are to be used with due regard for the interests of future generations⁽¹⁰⁴⁾. It is also

accurate on the other hand, if by this she means that the commitments assumed by one State under international law is not, *prima facie*, limited in the time, hence bind that State towards any living (or already conceived) individual, including the members of future generations *once they are born or conceived*, regardless of the fact that they were not alive at the time of the ratification of the treaty; the argument of the absence of *prima facie* limitation *ratione temporis* of the commitments assumed under international law is developed further in the text; *infra* iv. Pertinence of the Planetary Trust Theory to Preserve a Certain Quality Environment.

(101) See *infra* Chap. 5, Principle of Partnership.

(102) One out of five implications identified by Pardo in his original proposal of a common heritage of mankind was indeed the reservation for future generations, implying environmental considerations; Pardo, 'Law of the Sea- What Went Wrong', in Friedheim (ed.), *Managing Ocean Resources, A Primer* (Westview, 1979), Chap. 9, at 141; Pardo also construed the international seabed authority under 1982 UNCLOS, Part XI, as 'the trustee of all States'; *ibid.*, at 96. See also Agius, 'From Individual to Collective Rights, to the Rights of Mankind', in Busuttill *et al.* (eds.), *Our Responsibilities Towards Future Generations, A Programme of UNESCO and the International Environment Institute* (Foundation for International Studies & UNESCO, 1990), 27, at 39; Fleischer, 'The International Concern for the Environment: The Concept of Common Heritage', in Bothe (ed.), *Trends in Environmental Policy and Law* (IUCN, 1980), 321, at 338; Handl, 'Environmental Security and Global Change: the Challenge to International Law', in Lang *et al.* (eds.) *Environmental Protection and International Law* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 2, at 82; Kiss, 'La Notion de Patrimoine Commun de l'Humanité', 175 *RdC* (1982-II), 99, at 128 *et sequ.*; de Klemm, 'Environnement et patrimoine', in Ost & Gutwirth (eds.), *Quel avenir pour le droit de l'environnement?*, Actes du colloque organisé par le Centre d'étude du droit de l'environnement et le *Centrum interactie recht en technologie* (Facultés Universitaires Saint-Louis, 1996), 145, at 147; Serracino Inglott, 'The Common Heritage and the Rights of Future Generations', in Busuttill *et al.* (eds.) *ibid. op.cit.*, at 67; Wolfrum, 'The Principle of Common Heritage of Mankind', 43 *ZaöRV* (1983), 312, at 318.

(103) Hence the 1979 Moon Treaty provides, Art. 4(1), «The exploitation of the moon shall be the province of all mankind and shall be carried out for the benefit and in the interest of all countries, irrespective of their degree of economic or scientific development. Due regard shall be paid to the interest of present and future generations as well as to the need to promote higher standards of living and conditions of economic and social progress and development in accordance with the Charter of the United Nations». It should be noted however, that no express referenceto future generations is made in any other treaties endorsing the common heritage of mankind. No reference either is contained in UNGA A/Res./2749 (XXV), 17 December 1970, Declaration of Principles Governing the Deep-Sea and the Ocean Floor and the Subsoil Thereof, Beyond the Limits of National Jurisdiction, consecrating the Pardo's suggestion of the principle of common heritage of mankind for the law of the sea.

(104) Notwithstanding this apparent consensus on the intergenerational dimension of the expression of 'common heritage of mankind', one should acknowledge the lack of clear and unanimous understanding of the word 'mankind'. Some authors assimilate mankind to the community of States; see for instance *Quoc Dinh: Droit International Public*; §§ 266-267. Others on the contrary, understand mankind as referring to peoples, which might, occasionally encompass previous and future generations; see *inter alia* Gorove, (continued)

obvious that such dimension was subsequently overshadowed by the controversy concerning the intragenerational dimension of the concept, and has consequently remained virtually unexplored⁽¹⁰⁵⁾. Only one out of the three treaties endorsing the concept of common heritage of mankind explicitly refers to future generations, and none set forth criteria or standards of intergenerational equity to be applied. On the other hand, all three specify, using a similar wording, that:

«[t]he main purpose of the international regime to be established shall be (omitted)

(d) An equitable sharing by all States Parties in the benefits derived from those resources, whereby the interests and needs of the developing countries, as well as the efforts of these countries which had contributed either directly or indirectly to the exploration of the Moon, shall be given special consideration.»⁽¹⁰⁶⁾

The marginality of the consideration paid to intergenerational equity, as compared to that paid to intragenerational equity, is even more striking in those conventions addressing issues declared a 'common concern of mankind', such as the 1992 Climate Change Convention⁽¹⁰⁷⁾. There are serious indications suggesting that the opposition raised by the idea of an 'exploitation for the common benefit of the present generation' would be echoed in the case of an 'exploitation for the common benefit of present and future generations'. So would be the reticence of developing States to sacrifice some of

'The Concept of the Common Heritage of Mankind; A Political, Moral, and legal Innovation?', 9 *San Diego LR* (1972), 390, at 394. Other still hold that the international community is the group of contemporaneous States, whereas mankind encompasses also future generations, and is therefore a trans temporal concept; Dupuy, 'Communauté internationale et disparités de développement', *Cours général de droit international public*, 165 *RdC* (1979-IV), 9, at 219 *et sequ.*; see also from the same author, 'Humanité et environnement', XII *Annuaire de Droit Maritime & Aero-Spatial* (1993), 493. Besides, some authors take the extreme view that mankind constitutes a new subject of international law 'transcending state boundaries; see most notably Cocca, 'The Law of Mankind: Ius Inter Gentes Again', 12 *Annuaire de Droit Maritime & Aero-Spatial* (1993), 507; also Baslar, *The Concept of the Common Heritage of Mankind in International Law* (Kluwer Law International, forthcoming), Ph.D. manuscript, at 90 *et sequ.*; and *contra* Pardo & Christol, 'The Common Interest: Tension between the Whole and the Parts', in Macdonald & Johnston (eds.), *The Structure and Process of International Law: Essays in Legal Philosophy, Doctrine and Theory* (Martinus Nijhoff, 1986), 643, at 656. The only express definition of mankind in an international document is contained in Resolution 3384 (XXX), 10 November 1975, proclaiming the Declaration of the Use of Scientific and Technological Progress in the Interest of Peace and for the Benefit of Mankind; Art. 4 provides that the use of scientific and technological achievements for the purpose of violating the sovereignty and territorial integrity of other States «constitutes an inadmissible distortion of the purposes that should guide scientific and technological development for the benefit of mankind (i.e. the present and future generations)». The ICJ has confirmed such an understanding of mankind in its recent decision in the *Case concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, *Judgment*, 25 September 1997, General List, No. 92, 37 *ILM* (1998), 162, at 201.

(105) None of the articles dedicated to either common concern, common interest, or common heritage develop further the intergenerational dimension. See literature referred to above, *supra* n. 102 and 104, and *infra* Chap. 5, Principle of Partnership.

(106) 1979 Moon Treaty, Art. 11(7). See also 1967 Outer Space Treaty, Art. I; 1982 UNCLOS, Art. 140.

(107) Compare Art. 3.1 with Art. 4. See further *infra* Chap. 5, Principle of Partnership.

their actual and immediate developmental needs for the sake of hypothetical environmental gain, even though concern for future generations could appear less as an external interference into domestic affairs. Similar remarks apply to the related concepts of common concern and common interest of mankind⁽¹⁰⁸⁾.

In the light of the controversy attached to their nature and concrete implications, and the uncertainty with regard to their inter-temporal dimension, neither of the three concepts considered above constitutes a reliable precedent of well-settled intergenerational equity in international environmental law.

It is contended in the same spirit that «certain environmental standards of environmental protection may be viewed as rules of customary international law and treated as obligations *erga omnes*»⁽¹⁰⁹⁾. In line with her interpretation of humanity as a cross-temporal concept, Brown Weiss interprets the 'fundamental interest of the international community as a whole'⁽¹¹⁰⁾ and 'concern of all States'⁽¹¹¹⁾ as extending across time. The weight of, and criticisms against, such argument are similar to those discussed above, namely that whilst there is nothing to argue against the intergenerational dimension of *erga omnes* obligations⁽¹¹²⁾, the alleged *erga omnes* obligation constitutes a rather weak precedent of intergenerational equity, due both to the controversial *erga omnes* character of the obligation to assure 'certain standards of

(108) With regard to common concern, clear indications were given by UNEP that it has both a spatial and temporal facets; see Note of UNEP Executive Director on the Implications of the "Common Concern of Mankind" Concept on Global Environmental Issues to the UNEP Group of Legal Experts Meeting of Malta, 13-15 December 1990, reproduced in Cançado Trindade (ed.), *Human Rights, Sustainable Development and Environment* (Instituto Interamericano de Desarrollo, 1995), 318, Para. 5.

(109) 'The Planetary Trust: Conservation and Intergenerational Equity', at 544; in *In Fairness of Future Generations*; 122, Brown Weiss is even more assertive and argues that there is «[a]lready considerable *opinio juris* that States may already have an obligation to the international community at large to protect the environment».

(110) ILC's definition of international crimes, Draft Articles on the International Responsibility, Art. 19(2), in 1980 *YbILC* Vol. II, Pt. 2, at 32. The commentary to that Article explains the expression of international crime on the grounds that the violations it encompasses «inflicts kinds of damage which would be fearfully destructive not only of man's potential for economic and social development but also of his health and the very possibility of survival for the present and future generations»; *ibid.* at 108; see further *infra* Chap. 5, Principle of Partnership.

(111) *Barcelona Traction, Light and Power Company, Limited, Judgment*, ICJ Rep. 1970, 3, at Para. 33; see *infra* Chap. 5, Principle of Partnership.

(112) In fact, as a rule, there is nothing inherent in customary or conventional international law in general, that suggest that the synallagmatic or *erga omnes* obligations arising from that law are assumed only in relation to the 'generation' living at the time ratification of the conclusion of the treaty, or recognition of the customary norm; see *infra* iv. Pertinence of the Planetary Trust Theory to Preserve a Certain Quality Environment.

environmental protection⁽¹¹³⁾, and to the uncertainty regarding the minimum environmental standards to be secured⁽¹¹⁴⁾.

The third controversial aspect of the planetary trust is the reliance upon the human rights model, which pertains more to the legal conceptualisation of intergenerational equity in terms of planetary rights and obligations. It is thereby suggested that «[t]he extension of human rights law to embrace environmental security may accelerate the realisation of the purposes of the planetary trust by encouraging communities to fulfil their obligations to future generations...»⁽¹¹⁵⁾. Some international documents might confer a certain credit to this argument, insofar as they explicitly associate intergenerational equity with the right to a healthy environment or the right to development. The 1986 Tunis Declaration on Environment and Development for instance, provides that:

«Every individual has a basic right to live in an environment that is compatible with human dignity. He has a responsibility, in return, to protect this environment and enhance it both for himself and for his descendants»⁽¹¹⁶⁾

Likewise, the 1992 Rio Declaration on Environment and Development solemnly declares:

«The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.»⁽¹¹⁷⁾

The pros and cons of a human rights approach to environmental protection will be detailed later in the thesis and shall not be anticipated here⁽¹¹⁸⁾. However, the suggested link to an inter-temporal extension of human rights to accelerate the realisation of the purpose of a planetary trust is rather disconcerting, considering the clearly collective character of the suggested planetary rights, held by a *generation* taken as a group (and

(113) See *supra* Chap. 2/3. The Principle of Permanent Sovereignty over Natural Resources: a Principle of Customary Law.

(114) *Ibid. supra* n. 113; this point is further elaborated *infra* iii. Operational Implications of a Planetary Trust.

(115) 'The Planetary Trust: Conservation and Intergenerational Equity', 558.

(116) Sect. I(3); see also 1972 Stockholm Declaration on the Human Environment, Princ. 1. The link was also made by Justice Davide in *Minor Oposa* case, *supra* n. 2.

(117) Princ. 3. No reference to future generations is contained however in the 1986 Declaration on the Right to Development, which simply provides for States duty to formulate appropriate national development policies aiming at the constant improvement of the well-being of the entire population and of all individuals; Art. 2(3).

(118) See *infra* Chap. 6/3 Towards a More Holistic Approach to International Environmental Law: the Environment-Human Rights Law Dimension.

not individually by each of its members) in relation to other generations also taken as groups⁽¹¹⁹⁾. Classic human rights⁽¹²⁰⁾, in effect, are primarily intended to preserve *individual* interests (individualistic human rights), and are particularly ill-suited to pursue *collective* interests of a group (communal human rights), such as environmental interests of future generations⁽¹²¹⁾.

Against this conclusion, one should mention various attempts at the international and national levels to rely on classic human rights provisions, alongside the so-called right to a healthy environment, to preserve environmental interests. In the well-known *Port Hope Environmental Group v. Canada* communication to the UN Human Rights Committee, the rights to life, health and property of both present and future generations were invoked in relation to the dumping of nuclear wastes. The Committee had finally not to decide on the *locus standi*, as some of the applicants were living persons; it nonetheless qualified the reference to future generations as 'an expression of concern purporting to put into due perspective the importance of the matter raised in the communication'. The case was finally dismissed for non-exhaustion of domestic remedies⁽¹²²⁾.

The *locus standi* of the present generation to invoke its own interests and the interests of future generations was upheld by the Supreme Court of the Philippines on the basis of both 'highest law of mankind' and domestic law in the matter *Minors Oposa v. Secretary of the Department of Environment and Natural Resources* (1993)⁽¹²³⁾.

(119) This is true for the so-called solidarity or third generation human rights in general, that would include a potential right to environment and right to development; see *supra* Chap. 6, Principles Pertaining to Public Participation. One should perhaps specify that Brown Weiss apparently considers that planetary rights acquire some attributes of individual rights once held by the present generation, although they remain collective in essence, and the remedies for their violation benefit not individual members, but the whole generation(s); 'Our Rights and Obligations to Future Generations for the Environment', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 198, at 203.

(120) This excludes the 'third generation' human rights mentioned above, n. 119; 'third generation' human rights, including the right to a healthy and clean environment, are not sufficiently clear as to their substantive content to be of any significant practical support to further planetary rights; See *infra* Chap. 6/3/iii. Strength and Weakness of the Human Rights Mechanisms in Protecting Environmental Interests.

(121) Supanich, 'The Legal Basis of Intergenerational Responsibility: An Alternative View - The Sense of Intergenerational Identity', 3 *YbIEL* (1992), 94, at 97 *et sequ*; Waldron, 'Can Communal Goods be Human Rights?', 28 *European Journal of Sociology* (1987), 296. The tension between the collective and individual interests in human rights mechanism is more particularly developed in Chap. 6, Principles Pertaining to Public Participation.

(122) *Communic. No. 67/1980*, reprinted in *Selected Decisions of the Human Rights Committee*, Vol. 2 (Seventeenth to Thirty-second sessions), 20.

(123) *Supra* n. 2. Contrast the position of the Philippines Supreme Court in the *Minors Oposa* case with that of the US Supreme Court in the *Lujan* case; *Defenders of Wildlife v. Lujan*, 91 F 2d 117 (8th Cir.1990), reversed by US Supreme Court, *Lujan v. Defenders of Wildlife*, 119 L Ed 2d 351 (1992); on (continued)

Frequently invoked by international lawyers to substantiate their revendication for intergenerational rights and obligations⁽¹²⁴⁾, this case should nonetheless be considered in its legal context.

The admissibility of the case was decided in a jurisdiction allowing, to a certain degree, class action or even *actio popularis*. Under Sect. 12, Rule 3 of the Revised Rules of Court in the Philippines, all citizens of the Republic of the Philippines and taxpayers, are entitled to full benefit, use and enjoyment of the natural resource treasure that is the country's virgin tropical rainforests (taxpayers' class suit). Similar action would have been more difficult to justify under a legal system applying a more restrictive conception of victim, more particularly the actual injury component.

Besides, the practical importance of the *Minors Oposa* case should not be overstated, considering that the Court's decision exclusively concerned the admissibility of the application. The case was never decided on the merits, since the logging licenses that triggered the case had been cancelled administratively before the Supreme Court handed down its decision⁽¹²⁵⁾.

In last resort, it is suggested, in support of the planetary trust theory, that the numerous treaties expressly incorporating the principle of natural resources preservation for future generations «elevate the concept to the level of binding state obligation»⁽¹²⁶⁾. It should be underlined that these numerous references to intergenerational equity (1) are very often contained either in preambular clauses of treaty-law setting the overall spirit of the treaty but as such not source of binding rules⁽¹²⁷⁾ or in non-binding declarations

which see Just, 'Intergenerational Standing under the Endangered Species Act : Giving Back the Right to Biodiversity after *Lujan v. Defenders of Wildlife*', 71 *Tulane LR* (1996), 597.

(124) See Allen 'The Philippine Children's Case: Recognizing Legal Standing for Future Generations', 6 *Georgetown ILR* (1994), 713; Rest, 'Implementing the Principles of Intergenerational Equity and Responsibility', 24 *EPL* (1994), 314.

(125) We are indebted to Prof. G. Handl, Tulane Law School, for sharing with us this information. In an e-mail of March 18, 1998, Prof. Handl confirmed that the case had finally never been decided on the merits. He also reported that the lead attorney, Tony Oposa admitted that any decision on the merits by the Court would have been extremely difficult to enforce. On the other hand, it seems that the Supreme Court of the Philippines has since used the argument of intergenerational equity and sustainable development in a couple of other cases, 'but rather as reinforcing existing normative provisions' and not 'to create novel entitlements or obligations'; Prof. Handl, *ibid*.

(126) Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons*, Rep. 1996, 1, Weeramantry (diss. op.), Point II (3)(b)); also Brown Weiss, 'Intergenerational Fairness for Fresh Water Resources', 25 *EPL* (1995), 231; WCED-EG, *Environmental Protection and Sustainable Development* (Graham & Trotman/Nijhoff, 1987), at 44-45; WCED-EG however recognises such obligation to protect the environment for future generations only as far as international or transboundary resources or transboundary interference are concerned, and excluding the 'domestic environment'.

(127) 1970 Convention on the Law of Treaties, Art. 31(2); see also *Case concerning the Rights of nationals of the United States of America in Morocco, Judgment of August 27th, 1952*: ICJ Rep. 1952, 176, at 196-197; *South West Africa Cases (Ethiopia v. South Africa, Liberia v. South Africa)*, (continued)

and other political statements⁽¹²⁸⁾, and (2) are always construed in general terms, without any guidelines or criteria being provided to help to identify the operational content of such clauses⁽¹²⁹⁾. This tendency to refer to equity in very programmatic terms in the 'soft part' of international law indicates probably that intergenerational equity is well accepted as an 'inspirational' principle, whilst its legal status as a norm-creating concept is doubtful.

iii. Operational Implications of a Planetary Trust

As mentioned earlier on, the elementary characteristic of an international legal concept, customary or conventional, pertains to its norm-creating character, viz. the minimum degree of precision of its actual content and implications⁽¹³⁰⁾. Little indication is given in the planetary trust theory of how far the present generation is expected to preserve environmental resources for itself and for future generations. No criteria of assessment, no equitable minimum standards, no guidelines are spelt out, that could indicate which degree of fairness the present generation is accountable for. Rather, the planetary trust theory is based upon the broadly construed objective to pass the planet on to future generations 'in no worse conditions' than received⁽¹³¹⁾, or 'in approximately the same conditions' as received⁽¹³²⁾, with 'at least the same level of resources⁽¹³³⁾', but not necessarily 'an equal amount of resources'⁽¹³⁴⁾ as that enjoyed by the initial generation. A 'reasonable diversity' of the resource base⁽¹³⁵⁾ shall be maintained, and a

Preliminary Objections, Judgment of 21 December 1962: ICJ Rep. 1962, 319, at 330-331; see supra Chap. 1/2/iii. Legal Framework.

(128) See references n. 4, 6, 7. Among the treaties referring to intergenerational equity in their body text, one could mention the 1967 Outer Space Treaty, Art. I; 1972 World Heritage Convention, Art. 4; 1979 Moon Treaty, Art. 4(1); 1982 Jeddah Convention for the Conservation of the Red Sea and Gulf of Aden Environment, Art. 1(1); 1989 ACP-EEC Lomé IV, Art. 33; 1992 ECE Watercourses Convention, Art. 2(5); 1992 Climate Change Convention, Art. 3(1); and 1976/95 Barcelona Convention on Mediterranean Sea, Art. 4(2).

(129) See *infra* n. 155 to 166.

(130) See standards set forth in *North Sea Continental Shelf* cases in the context of the formation of a customary rule, *supra* Chap. 1/2/iii. Legal Framework, and Chap. 3/2/iii. Status of Precautionary Principle under International Law.

(131) Conservation of quality; 'The Planetary Trust: Conservation and Intergenerational Equity', 531 and 581; *In Fairness to Future Generations*, 24.

(132) 'The Planetary Trust: Conservation and Intergenerational Equity', 510.

(133) *In Fairness to Future Generations*, 25.

(134) 'The Planetary Trust: Conservation and Intergenerational Equity', 532.

(135) Conservation of option; 'The Planetary Trust: Conservation and Intergenerational Equity', 527.

'reasonable access' to the legacy of present generation⁽¹³⁶⁾ shall be guaranteed, based not on the prediction of the preferences of future generations, but on the presumption that future generations would want at least 'as a minimum', a 'reasonably secure and flexible' resource base⁽¹³⁷⁾, and a 'reasonably decent' natural environment, in which they can pursue their goals according to their own values⁽¹³⁸⁾. The reference to Rawls' just saving principle⁽¹³⁹⁾, based on a 'fair equivalent in real capital'⁽¹⁴⁰⁾ does not offer particularly helpful objective criteria⁽¹⁴¹⁾.

Such conception of 'reasonable equity'⁽¹⁴²⁾ leaves plenty of room for the subjective arithmetic of the present generation paradoxically vested with the entire responsibility «to set the criteria for defining the actions that infringe upon [rights of future generations]»⁽¹⁴³⁾. It finally rests upon the present generation (1) to define whether, and to what extent, its own actions bear in an unreasonable or inequitable fashion upon future generations inasmuch as the consequence of its actions can be predicted, and (2) to decide on the opportunity and nature of the equitable measures to be taken. The margin of appreciation left to the 'trustee' of natural resources, not circumscribed by clear guidelines, is particularly striking on three accounts:

1) The tendency to self-indulgence of men is indisputable and undisputed by the proponents of the planetary trust theory⁽¹⁴⁴⁾;

(136) Conservation of access; *In Fairness to Future Generations*, 38.

(137) *In Fairness to Future Generations*, 24-25; Kavka, like Brown Weiss, considers that there is no objective reason to expect that the basic biological needs and interests of future generations, otherwise called the biologically obvious, will substantially differ from ours; 'The Futurity Problem', in Sikora & Barry (eds.), *Obligations to Future Generations* (Temple University Press, 1978), 180, at 189. See also Gillespie, *supra* n. 92, Ph.D. manuscript, 190. Problems with the evaluation of future generations needs of course, arise for the needs beyond the biologically obvious; as it is suspected that Brown Weiss' theory planetary trust targets the satisfaction of higher needs than the biologically obvious.

(138) 'The Planetary Trust: Conservation and Intergenerational Equity', 526.

(139) 'The Planetary Trust: Conservation and Intergenerational Equity', 532.

(140) Rawls, *A Theory of Justice* (Oxford University Press, 1973), 288.

(141) The major difference between Brown Weiss' reasonable equity principle, and Rawls' just saving principle is that the latter principle is chosen by the 'ideal observers', which should guarantee (inasmuch as ideal observers really exist) a total objectivity and disinterest in the definition of the just saving principle. Definition of the reasonable equity criteria on the other hand, is left to the appreciation of a trustee having legitimate vested interests not always compatible with those of the future beneficiaries of the trust; see below in the text.

(142) 'The Planetary Trust: Conservation and Intergenerational Equity', 525.

(143) *In Fairness to Future Generations*, 104.

(144) See *supra* n. 86.

2) Besides, the present generation is not even a shadow of Rawls' 'ideal observers' who, placed 'behind the veil of ignorance'⁽¹⁴⁵⁾, will choose and define principles of justice, in our case the 'just saving principle', «the consequences of which they are prepared to live with whatever generations they turn to belong to»⁽¹⁴⁶⁾. Quite the contrary, the present generation stands in a highly self-interested position, as it combines the functions of trustee and beneficiary of the same trust *res*. As a trustee, the present generation is expected to act with 'honesty, loyalty, and standards of skill and prudence that can be expected from a reasonable person managing his own affairs'⁽¹⁴⁷⁾. Its fiduciary obligation commands it not to put itself in a position where its interest and duties conflict⁽¹⁴⁸⁾. As the beneficiary of the trust, it has an interest to maximise the benefit derived from the trust *res*⁽¹⁴⁹⁾.

It is usually agreed in the context of the domestic institution of trust, that the fact that the trustee may also have rights as beneficiary of the trust is not necessarily inconsistent with existence of a trust⁽¹⁵⁰⁾. Based on the simplistic general assumption that the preservation and satisfaction of the actual interests of the present generation do not, as a rule, conflict with hypothetical needs and interests of future generations, but imply on the contrary similar measures⁽¹⁵¹⁾, the planetary trust theory (a) envisages no particular risk of conflict in the function of trustee and that of trust beneficiary⁽¹⁵²⁾, and (b) provides no specific guideline to equitably balance the

(145) *Viz.* not knowing one's personal traits such as wealth or intelligence, one's social position, the society which one's belong to, the political and economic situation. The ideal observer is thus placed in an objective position, to guarantee that (s)he takes the decision of a free reasonable and rational person in a fair and just society; Rawls, *A Theory of Justice*, *supra* n. 140, at 136 *et sequ.*

(146) Rawls, *A Theory of Justice*, *supra* n. 140, at 137.

(147) *Supra.* n. 39. In his separate opinion in the *Maritime Delimitation in the Area between Greenland and Jan Mayen* Justice Weeramantry refers (without elaborating further) to the 'standards of due diligence expected of a trustee'; *Judgment*, *ICJ Rep.* 1993, 38, Weeramantry (dis.op.), at Para. 240.

(148) *Supra.* n. 38.

(149) *Supra.* n. 40.

(150) See the 1985 Hague Convention of the Law Applicable to Trusts and on their Recognition, Art. 2; see further *Underhill & Hayton: Law Relating to Trusts and Trustees*, 3 and 208; see also the 1957 US Second Restatement of Trust, § 99.

(151) And *inter alia* that the satisfaction of developmental needs are not incompatible with the preservation of the environment; 'Intergenerational Fairness for Fresh Water Resources', 25 *EPL* (1995), 231, at 233.

(152) Brown Weiss recognises however that certain conflicts could occur in few cases, and would therefore require specific guidelines; she provides none however; 'Intergenerational Fairness for Fresh Water Resources', 25 *EPL* (1995), 231, at 233. Van Dyke is probably closer to reality as he suggests that conflict between present and future generations' needs and interests are likely to be frequent, if not the rule rather than the exception. The issue is therefore one of balancing the conflicting needs and interests, and
(continued)

interests and needs to avoid that one generation bears in a disproportionate manner the consequences of the decisions taken for the benefit of the other.

3) Finally, the planetary trust theory raises the issue of foreseeability of the long-term effects of our actions upon the environment and related predictive uncertainty. No indication is given of whether our responsibility to future generations shall be based on a mere intuition, *prima facie* evidence, or the reasonably foreseeable adverse environmental implications of our actions⁽¹⁵³⁾. In the light of such indeterminacy, one could argue for instance, that our responsibility to future generations is, at least to a certain extent, circumscribed by our ability to foresee the effects of our actions on future generations⁽¹⁵⁴⁾.

No further clarification concerning any of these three aspects is contained in the very rhetorical 1988 Goa Guidelines on Intergenerational Equity, prepared by an Experts Group set up by the UN University in the context of its research project on international law, common patrimony and intergovernmental equity, and chaired by Brown Weiss. Likewise, the vast majority of the intergenerational clauses in international documents are worded in vague terms of 'rational'⁽¹⁵⁵⁾, 'equitable'⁽¹⁵⁶⁾, or 'wise exploitation'⁽¹⁵⁷⁾, of 'doing all that can be done' to preserve the heritage of future generations⁽¹⁵⁸⁾, of 'appropriate action'⁽¹⁵⁹⁾, of 'due consideration' for the needs of

where necessary, establishing criteria of priority; Van Dyke, 'The Rio Principles and our Responsibilities of Ocean Stewardship', 31 *OCM* (1996), 1, at 4. The 'energy dilemma' constitutes a particularly evident example of conflicting environmental interests of present and future generations; the interest of the present generation to rely on nuclear power as the most technically feasible non-fossil alternative source of energy, and thereby reduce the amount of carbon dioxide released in the atmosphere and related adverse environmental effects in the short, medium and long terms, conflicts with future generations interests not to suffer from the long term toxic release of nuclear wastes dumping sites; Berkovitz, 'Pariahs and Prophets: Nuclear Energy, Global Warming, and Intergenerational Justice', 17 *Columbia JEL* (1992), 245.

(153) This question could probably be clarified resorting by analogy to the criteria applied in the context of the precautionary principle; *supra* Chap. 2/3 Constitutive Elements of a Precautionary Principle.

(154) This argument is endorsed for instance by Berkovitz, *ibid. supra* n. 152, at 320; Cameron, 'Do Future Generations Matter?', Dower (ed.), *Ethics and Environmental Responsibility* (Adlershot, 1989), Chap. 4; Kavka, 'The Futurity Problem', in Sikora & Barry (eds.), *Obligations to Future Generations* (Temple University Press, 1978), 180; Narveson, 'Future People and Us', *ibid.*, 38; Pasek, 'Obligations to Future Generations: A Philosophical Note', 20 *World Development* (1992), 513. See also *supra* Chap. 3, Prevention and Precautionary Principles.

(155) 1968 African Convention on Nature, preambular Para. 6; 1975 Helsinki Final Act of CSCE, Sect. on the Environment, preambular Para. 1; 1989 Brasilia Declaration on the Environment, Para. 1.

(156) 1976/95 Barcelona Convention on Mediterranean Sea, Art. 4(2); also 1992 Rio Declaration on Environment and Development, Princ. 3.

(157) 1979 Bonn Convention on the Conservation of Migratory Species, preambular Para. 2.

(158) 1989 Hague Declaration on the Environment, Para. 5.

present and future generations⁽¹⁶⁰⁾, of preservation of the planet 'in a condition which guarantee life in human dignity for all'⁽¹⁶¹⁾ or 'the well-being' of all⁽¹⁶²⁾, or of a 'healthy environment'⁽¹⁶³⁾. Reference is also made to 'sustainably use' the environment for the benefit of present and future generations⁽¹⁶⁴⁾ or, by analogy to the definition of sustainable development, to the necessity 'to meet the needs of the present generation without compromising the ability of future generations to meet their own needs'⁽¹⁶⁵⁾. In a large number of cases, intergenerational equity clauses express in a very neutral way the necessity to 'preserve (or safeguard) and improve the environment' for the benefit and enjoyment of present and future generations⁽¹⁶⁶⁾. In sum, «[w]hat we owe to future generations is neither Everything nor Nothing, but merely Something»⁽¹⁶⁷⁾, and this something is still unclear.

As previously stated, the tenants of the planetary trust theory do not deny that further implications of planetary obligations and rights 'have yet to be woven into the fabric of international law'⁽¹⁶⁸⁾. No attempt was really made in the negotiations of recent documents containing an 'intergenerational equity clause' to identify the practical implications attached to the recognition of the needs of future generations. Rather, «in each case the principle appears to have been accepted as an article of faith, drawing on

(159) 1994 Desertification Convention, preambular Para. 26.

(160) 1979 Moon Treaty, Art. 4(1).

(161) 1972 Stockholm Declaration on the Human Environment, Princ. 1 and 2; 1986 Tunis Declaration on Environment and Development, I(3); 1982 Nairobi Declaration, Para. 10.

(162) 1970 Strategy for the Second Development Decade, preambular Para. 4.

(163) 1989 Paris Economic Declaration of the G7, Sect. on the Environment, Para. 33.

(164) 1992 Biodiversity Convention, preambular Para. 23; 1992 OSPAR Marine Environment Convention, preambular Para. 3; 1997 UN Convention on the Non-Navigational Uses of International Watercourses, preambular Para. 5.; 1976/95 Barcelona Convention on Mediterranean Sea, preambular Para. 2; 1992 Forestry Principles, Princ. 2(b).

(165) 1992 ECE Watercourses Convention, Art. 2(5); also 1990 Bergen Ministerial Declaration on Sustainable Development; 1990 Bangkok Ministerial Declaration on Sustainable Development, Para. 15.

(166) 1946 International Convention for the Regulation of Whaling, preambular Para. 1; 1972 World Heritage Convention, Art. 4; 1973 CITES, preambular Para. 1; 1976 Barcelona Convention on Mediterranean Sea, preambular Para. 2; 1985 Nairobi Convention on the Marine Environment in East Africa, preambular Para. 2; 1985 ASEAN Agreement on the Conservation of Nature, preambular Para. 1; 1986 Noumea Convention on the Environment in the South Pacific, preambular Para. 3; 1992 Climate Change Convention, Art. 3(1). See also 1975 Economic Charter, Art. 30; 1982 World Charter for Nature, preambular Para. 5; 1989 Amazon Declaration, Para. 2; 1990 Tlatelolco Platform on Environment and Development, Para. 7.

(167) Narveson, 'Future People and Us', in Sikora & Barry (eds.), *Obligations to Future Generations* (Temple University Press, 1978), 38.

(168) *Supra.* n. 83.

pre-existing language in earlier treaty and other soft-law developments»⁽¹⁶⁹⁾. In fact, as was concluded in respect of the principle of precaution, it is probable that the lack of clearly identified implications attached to intergenerational equity, and hence the lack of potential normative implications, constituted a decisive factor behind the frequent references thereto in recent documents.

iv. Pertinence of the Planetary Trust Theory to Preserve a Certain Quality Environment

Notwithstanding the uncertainty pertaining to the moral and legal foundations of intergenerational equity and to the substantive implications of a planetary trust, the very necessity of such complex theoretical juridical construction, and the no less fictive categorisation of human beings into successive generations⁽¹⁷⁰⁾, to ensure the perpetuation of an environment of a certain quality through time is open to question. The planetary trust theory is presented as «a systematic effort to develop the inter temporal dimension of international law»⁽¹⁷¹⁾. A preliminary question to answer before even considering such argument, is whether such dimension of international law has not already been developed, and needs only to be actually implemented.

There is nothing in international environmental law to indicate, *prima facie* ⁽¹⁷²⁾, that conventional or customary commitments assumed by States engage their responsibility only towards the 'present generation', that is towards the persons living at the time of recognition of the customary character of a norm or at the time of ratification of a treaty. International obligations are primarily assumed in relation to a certain *object* - in the present case the protection of the environment in general, or the reduction of ozone layer depletion, air and marine pollution and loss of biodiversity in particular - without being necessarily attached to specific '*beneficiaries*' or '*destinataires*'.

(169) Sands, 'Protecting Future Generations : Precedents and Practicalities', (FIELD, 1994), Working Draft at 6 (n. omitted); also from the same author 'International Law in the Field of Sustainable Development', 65 *British YbIL* (1994), 303, at 342; *Principles* (Vol. I), 199-220.

(170) Brown Weiss does not specify how many years one generation encompasses; according to the *Oxford Dictionary*, one generation covers the average time in which children are ready to take the place of their parents, that is approximately 30 years. As pointed out by Young, should one accept such definition, it practically means that three generations will always coexist, namely the retiring, the present and the emerging generations; Young, *For Our Children's Children : Some Practical Implications of Inter-Generational Equity and the Precautionary Principle*, Resource Assessment Commission Occasional Publication No. 6 (Australian Government Publishing Service, 1993), 2.

(171) *In Fairness to Future Generations*, 2.

(172) Unless the validity of the treaty ratified is explicitly limited in time and provides for no possibility of renewal, or the subject matter of commitments assumed, under customary or treaty law, is *per definitionem*, limited in time.

Hence for instance, the no substantial harm principle⁽¹⁷³⁾ commands States to abstain from any activities that could harm the environment of other existing countries, and precludes them from engaging into activities that will or could have, as far as it is possible to predict with a certain degree of certainty⁽¹⁷⁴⁾, an adverse transboundary impact in the future. This obligation, however, is owed by States to other potentially affected States existing *today*, and not hypothetical future generations, represented by a no less hypothetical ombudsman⁽¹⁷⁵⁾. The State engaging nonetheless into such activities commits not merely a *potential* violation of customary international environmental law to be concretised in the future, but indeed an *actual* violation thereof; it can therefore be held responsible on this account by affected States within the same degree of certainty as mentioned above⁽¹⁷⁶⁾. This is not tantamount to saying that the existence of a damage is irrelevant to the establishment of the responsibility of the State for the consequence of its acts⁽¹⁷⁷⁾. It is only argued that, where a damage to the environment can be attached, with a certain degree of certainty⁽¹⁷⁸⁾, to a given activity,

(173) See *supra* Chap. 2/4/ii/a. Equitable utilisation, Sic Utere Tuo and related No Substantial Transboundary Harm Principles.

(174) A *prima facie* case not necessarily confirmed on a scientific point of view could even suffice where the precautionary principle is applicable; *supra* Chap. 3. Prevention and Precautionary Principles.

(175) On the various attempts and suggestions to appoint a UN Representative of the interests of future generations in the context of the 1992 Conference on the Environment and Development, see *infra* Title 3. Beyond the Rhetoric of a Planetary Trust: Intergenerational Equity as an Inspirational Principle of Modern International Environmental Law.

(176) In this respect, it is interesting to note that whereas *Trail Smelter dictum* is worded in terms of 'duty not to cause injury', hence focuses on the injury, 1972 Stockholm Declaration on the Human Environment, Princ. 21 focuses on the '*activities* causing transboundary harm'; see *supra* Chap. 3/2/ii. Precaution as a Principle of International Law.

(177) The importance of the realisation of the harm as a precondition to responsibility is particularly debated in relation to ILC's definition of the internationally wrongful act, in the context of the codification of state responsibility; an excellent synthesis of this aspect of the discussion of the Draft Articles is made by Tanzi, 'Is Damage a Distinct Condition for the Existence of an Internationally Wrongful Act?', in Spindi & Simma, *United Nations Codification of State Responsibility* (Oceana, 1987), 1. The element of harm/damage is not included among the essential elements of ILC's definition; Art. 3 provides that «[t]here is a an internationally wrongful act of a state when: (a) conduct consisting of an action or omission is attributable to the state under international law; and (b) that conduct constitutes a breach on an international obligation of the state». The comment to that provision expressly excludes the damage as a constituent of the internationally wrongful act; see 1973 *YbILC* Vol. II, 183. Art. 3 was kept unmodified in 1996 Draft Articles; UNGA, *Report of the ILC on Its Work of its 48th Session (May 6-July 26, 1996)*, GAOR Fifty-first Session, Suppl. No. 10 (A/51/10), 125, at 126. Some scholars however consider damage as an essential therefore necessary component of an internationally wrongful act; see for instance Ross, *A Textbook of International Law, General Part* (Longmans, Green & Co., 1947), 242; Guggenheim, *Traité de droit international public*, Tome II (Librairie de l'Université, Georg & Cie, 1954), at 1.

(178) According to the criteria of reasonable foreseeability and due diligence developed in the context of the prevention and precautionary principle; *supra* Chap. 3/4/i. Unilateral Duty of Due Diligence.

the actualisation of a the damage is not necessary to engage the responsibility of a State in relation to such activity⁽¹⁷⁹⁾.

In fact, by focusing on artificial duty-bearers and right-holders in international environmental law⁽¹⁸⁰⁾, the planetary trust theory introduces some temporal limits with regard to the commitments assumed under this area of law, when neither expressly specified nor inherent in the subject matter of that law, which hamper more than enhance a proper implementation of international environmental law. Birnie is particularly sceptical about the practical utility of an 'institutionalised' intergenerational equity and planetary trust theory, and comments that:

«It is doubtful (...) whether adoption of such futurological concepts as inter- or intra-generational rights (...) will enhance the existing methods of developing the necessary regulatory regime, although they clearly play political, publicizing, educative roles in raising public awareness and generating the debate that cranks the existing mechanisms into action (...) There are too many scientific uncertainties, too many development differences, too wide a range of political interests in every state for it to be otherwise. States have the will to protect the environment on their terms and by the methods preferred by them, under which they have some control over the pace of regime change. They are not yet ready to abandon theoretical notions of sovereignty (...) in favour of the amorphous demands of future generations or allegedly vested environmental rights of an indeterminate and limitless character.»⁽¹⁸¹⁾

4. Beyond the Rhetoric of a Planetary Trust: Intergenerational Equity as an Inspirational Principle of Modern International Environmental Law

It is difficult to deny *all* currency to the principle of intergenerational equity when considering a concept which is, *per definitionem*, resolutely oriented towards the welfare of future as much as present generations. 1992 Agenda 21 is itself defined as a strategy *for* 'the twenty first century, or more exactly *towards* the next century. However, between the acknowledgement of the importance to consider the interests and anticipated basic needs of hypothetical future generations, and the recognition of rights to future generations and corresponding duties of the present generation, there is a

(179) Although not a successful example, Australia's application against France's resumption of atmospheric nuclear tests was based on Australia's legal interest in the observance of the alleged *erga omnes* obligation to refrain from atmospheric nuclear testing, irrespective of concrete injury suffered from its violation; see *Nuclear Tests case (Australia v. France)*, ICJ *Pleadings*, Vol. I, Para. 437.

(180) This approach also fails to reflect the factual reality that States, rather than 'peoples', or 'generations', primarily bear the responsibility and rights imposed or granted by international environmental law.

(181) Birnie, 'International Environmental Law: its Adequacy for Present and Future Needs', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 2, at 83-84.

considerable step which States are clearly not prepared to take. As clearly pointed out by Sands:

«[A]ll States have now accepted the general principle that the activities of present generations are limited by the obligation to take into account and safeguard the developmental and environmental needs of future generations. Evidence of the broad acceptance of that principle does not, however, translate easily into prescriptions as to what the principle means in practise.»⁽¹⁸²⁾

Since the first clear expression of intergenerational equity was made in relation to the environment, in the 1972 Stockholm Declaration on the Human Environment, any reference to trust, intergenerational rights, obligations or even responsibility, has been purposely avoided in the international documents referring to intergenerational equity or future generations⁽¹⁸³⁾. A first draft of the 1972 Stockholm Declaration, Principle 2, presented by the Inter-Governmental Working Group set up by the Preparatory Committee of the 1972 Stockholm Conference on the Human Environment and supported by the Secretary General provided that the natural resources of the earth «shall be hold in trust for present and future generations». The reference to trust was strongly opposed by States as 'unduly restrictive of the concept of national sovereignty', and was eventually replaced by the more neutral formulation of «natural resources (...) must be safeguarded for the benefit of the present and future generation...»⁽¹⁸⁴⁾. The use of the passive form to avoid any mention of rights and duties, rights holders and duty bearers turned the whole issue into a matter of benefit, interest or concern⁽¹⁸⁵⁾.

The term of 'trust' was also avoided in 1986 WCED-EG Legal Principles for Environmental Protection and Development, even though WCED Group of Experts referred to the idea of trust in their comment to Principle 2⁽¹⁸⁶⁾. In the same spirit, the historical responsibility of States for the preservation of nature for present and future

(182) Sands, 'Protecting Future Generations : Precedents and Practicalities', (FIELD, 1994), Working Draft at 6.

(183) See documents refereed to *supra* n.4, 6 and 7.

(184) See further on this initiative: Sohn, 'The Stockholm Declaration on Human Environment', 14 *Harvard ILJ* (1973), 433, at 456.

(185) Boyle, 'International Law and the Protection of the Global Atmosphere: Concepts, Categories and Principles', in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 1, 12-13.

(186) WCED-EG, *Environmental Protection and Sustainable Development* (Graham & Trotman/Nijhoff, 1987), at 43.

generations was solemnly proclaimed as «a prerequisite for the normal life of man» (187), and was not explicitly based on an hypothetical planetary trust. Reference to a planetary trust is cautiously avoided in the 1992 Rio Declaration on the Environment and Development and, as already mentioned, in 1992 Agenda 21.

Malta's suggestion to appoint a Trusteeship Council or a High Commissioner that would assume, *inter alia*, the task of a trustee made at the occasion of the 1992 Conference on the Environment and Development was finally abandoned⁽¹⁸⁸⁾. The Commission on Sustainable Development, set up to monitor, review and consider progress in the implementation of the international environmental policy and law set out Agenda 21, does indirectly consider the interest of future generations inasmuch as it is implied in the Agenda; it has not the mandate, however, to act as a genuine ombudsman for future generations⁽¹⁸⁹⁾.

One merit of the planetary trust theory has been to highlight the often neglected inter-temporal dimension of international law in general, and of international environmental law in particular. As Kiss pointed out, international environmental law is

(187) Resolution 35/8, 30 October 1980.

(188) For a for a critical view on the various attempt to set up a UN Guardian for Future Generations, see Sands, 'Protecting Future Generations : Precedents and Practicalities', (FIELD, 1994), Working Draft. Equally critical of the practicability of such organ, Birnie points out that the only existing international example of such ombudsman for future generations are the supervisory authorities, established by States party to the 1974 Nordic Convention on the Protection of the Environment (Art 4) to 'safeguard general environmental interests insofar as nuisance arising out of environmentally harmful activities in another Contracting State'; the supervisory authority is allowed *inter alia* to institute proceedings, and to be heard directly before the competent administrative or judicial authority of another Contracting States regarding the permissibility of environmentally harmful activities, or to lodge a complaint against the decision of such authority taken in application of the law; Broms, 'The Nordic Convention on the Protection of the Environment', in Flinterman *et al.* (eds.), *Transboundary Air Pollution* (Martinus Nijhoff, 1986), Chap. 8, at 146 *et sequ.* No report was made of any of these authorities being actually activated however; 'International Environmental Law: its Adequacy for Present and Future Needs', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 2, at 84. Another 'domestic' example of ombudsman for future generations is the French Conseil pour les droits des générations futures, established by presidential decree as a presidential consultative instance body, to ensure that due consideration is paid to environmental issues in public policies and the coherence of the latter with the goals set up at the 1992 Conference on the Environment and Development. The Council can take action and report to the President *proprio motu*, or upon request from members of government, the presidents of parliamentary assemblies, and recognised associations for the protection of nature. No indication is given of the success and actual impact of the institution; see constitutive decree, Décret No. 93-298, 8 March 1993, Arts. 1 & 2; the decree is reproduced *in extenso* in Kiss & Shelton, *Traité de Droit Européen*, at 36. For a presentation of the various arguments and counter-arguments for direct representation of future generations, see further Kavka & Warren, 'Political Representation for Future Generations', in Elliot & Gare (eds.), *Environmental Philosophy, A Collection of Readings* (The Open University Press, 1983), 21.

(189) No explicit reference to future generations is made in Agenda 21, Para 38.11, providing its appointment (although reference in made to the proposal to appoint a guardian for future generations at Para. 38. 45) or in the founding resolutions, ECOSOC Res./E/1993/207, endorsed by UNGA A/Res./47/191, 22 December 1992. Generally on the Commission, see Orliange, 'La commission du développement durable', 39 *AFDI* (1993), 820.

inherently 'future oriented' in the sense that it contemplates measures affecting, or on the contrary preserving, environmental resources related to present activities, which effects often occur in the near or far future⁽¹⁹⁰⁾. The issue, therefore, is not to create and develop new principles and new institutions to enforce those principles, but to implement and exploit existing devices and rules⁽¹⁹¹⁾.

A more effective exploitation of the existing inter temporal dimension of international law could pass by a redefinition of the quality to act in environment related cases, both at the inter-state level and at the level of individual action at the domestic level or in the human rights procedures, by the intensification of the participation of non-governmental actors in the national and international decision-making and policy-shaping⁽¹⁹²⁾, by a greater accountability of governments for their own environment⁽¹⁹³⁾, and a more effective co-operation between States, all sectors and every level of society on environmental issues⁽¹⁹⁴⁾, and by the clarification and proper implementation of the precautionary principle⁽¹⁹⁵⁾.



(190) Kiss, 'Le droit international de l'environnement, un aspect du droit international de l'avenir ?', in Dupuy (ed.), *The Future of International Law of the Environment*, Hague Academy of International Law Workshop 1984 (Martinus Nijhoff, 1985), 471, at 477.

(191) Sands, 'Protecting Future Generations : Precedents and Practicalities', (FIELD, 1994), Working Draft, 11.

(192) See *infra* Chap. 6, Principles Pertaining to Public Participation.

(193) See *supra* Chap. 2, Permanent Sovereignty over Natural Resources.

(194) See *infra* Chap. 5, Principle of Partnership.

(195) See *supra* Chap. 3, Prevention and Precautionary Principles.

CHAPTER FIVE
PRINCIPLE OF PARTNERSHIP: ASSISTANCE, CO-OPERATION AND CO-ORDINATION RECONSIDERED

1. <u>Introduction</u>	220
2. <u>Partnership in National and International Law</u>	225
i. Domestic Institution of Partnership: the English Example.....	225
ii. Partnership-like Concept in International Law: the Case of the Common Heritage of Mankind.....	230
iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership.....	234
iv. Common Concern, Common Interest of Mankind: Global Partnership or Global Bargain? ...	243
3. <u>The Parameters for Global Co-operation</u>	248
i. Financial Assistance: Additionality and Compensation.....	252
ii. Transfer of Technology	256
iii. Common But Differentiated Responsibility.....	259
4. <u>The Terms of the Bargain</u>	261
5. <u>Conclusions: Regional Environmental Partnerships, Global Bargain, and International Co-ordination</u>	272

1. Introduction

Reference to *partnership* in international law in general, and international environmental law in particular, is recent. Apart from isolated allusions thereto essentially in the context of decolonisation and development⁽¹⁾, the concept of

⁽¹⁾ In an article entitled 'The Passing of the European Order' published in the late 1950s, H. Luthy called upon European States «to find the road from tutelage to partnership...»; 8 *Encounter* (1957), 3, at 12, referred after Röling, *International Law in an Expanded World* (Djambatan, 1960), at 86, n.18. One of the earliest express reference to partnership was made in Reference the 1970 Strategy for the Second Development Decade, Para. 84 *in fine*; such reference reflected the widespread belief that the failure of the first UN development decade (in the 1960s) - sometimes called the 'lost decade' or the 'development decade without a development policy', was largely due to the lack of common strategy and real partnership; UNGA, A/Res./2219 (XXI), December 19, 1966; Verwey, *Economic Development, Peace and International Law* (VanGorcum, 1972), 284; see also Bouveresse, *Droit et politiques du développement et de la coopération* (Presses Universitaires de France, 1990), Part 4, Chap. 1 & 2; Flory, *Droit international du développement* (Presses Universitaires de France, 1977), Chap. III. The necessity of a real partnership to promote economic development was clearly underlined in the final report of the Pearson Commission, called after the name of its chairman, requested by the World Bank to elaborate some guidelines for development strategies; Pearson & Boyle *et al.*, *Partners in Development*, Report of the Commission on International Development (Pall Mall, 1969). Interestingly, the reference to partners was dropped in the French version, entitled *Vers une action commune pour le développement du tiers-monde* (Denoël, 1969). Similar conclusions were reached by the UN appointed Jackson Commission, (continued)

partnership was really given international currency at the 1992 Rio Conference on Development and Environment, convened 'with the goal of establishing a new and equitable global partnership'⁽²⁾. 1992 Agenda 21, often referred to as a 'blueprint for a renewed partnership towards sustainable development in the next century'⁽³⁾, contains, in its English version, over thirty references to partnership(s), some of them worded in general terms of 'global partnership for sustainable development'⁽⁴⁾, others relating to more specific subject matters⁽⁵⁾ or to specific groups⁽⁶⁾.

Nevertheless, the concept of partnership as used at the international level has remained largely ill-defined in terms of its actual meaning and practical implications. The overall context within which it was formulated⁽⁷⁾ tends to suggest that partnership as understood in the present state of international environmental law has little in common with the domestic institution of the same name. Rather, it appears to be yet another expression for co-operation.

Like international law in general⁽⁸⁾, international environmental law has evolved from a law of coexistence to a law of co-operation, from a law of bilateral co-operation based

monde (Denoël, 1969). Similar conclusions were reached by the UN appointed Jackson Commission, vested with the responsibility to report upon the overall capacity of the UN development system, and by the ECOSOC appointed Tinbergen Committee; see Jackson *et al.*, *A Study of the Capacity of the United Nations Development System*, E.70.I.10 (United Nations, 1969); and Tinbergen *et al.*, *Report on Planning and Development* (1970); see also various national reports on bilateral aid, mentioned in Flory, *ibid. supra*, at 161 *et sequ.*

(2) 1992 Rio Declaration on Development and Environment, preambular Para. 3.

(3) United Nations, *The Global Partnership for Environment and Development* (United Nations, 1993), at 15.

(4) See Paras. 1.1, 1.2, 1.6, 2.1.

(5) Namely human settlements (7.4, 7.9(e), 7.30(d), 7.45(c), 7.77(b)), decision-making (8.2), sustainable mountain development (13.18(c)), biotechnology (16.1), hazardous wastes (20.18(c)), financial resources (33.9), education (36.5(c) and (i)), capacity building (37.2, 37.5).

(6) See *infra* n.12.

(7) *Infra* 2/ii. Partnership-like Concept in International Law: the Case of the Common Heritage of Mankind; 2/iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership (); see also *supra* Chap. 2/2/iii. Sovereignty over Environmental Resources and Environmental Policies versus Globalisation of Environmental Standards and Policies.

(8) On the evolution of 'modern' international law and the emergence of a 'positive peace' and 'international law of welfare', see Cassese, *International Law in a Divided World* (Clarendon, 1986), Chapters 3, 12 and 13; Friedmann, *The Changing Structure of International Law* (Stevens & Sons, 1964); Friedmann, 'The Changing Structure of International Law', in Falk *et al.* (eds.), *International Law, a Contemporary Perspective* (Westview, 1985), 142; Henkin, 'General Course on Public International Law', 216 *RdC* (1989-IV), 9; Röling, *International Law in an Expanded World* (Djambatan, 1960). On 'renewed' co-operation after the cold-war diplomacy, see for instance McWhinney *et al.* (eds.), *From Coexistence to Co-operation: International Law and Organization in the Post Cold War Era* (Martinus Nijhoff, 1991).

The classic conception of international rules as static rules of *coexistence* principally concerned with peace and security issues has been particularly criticised by developing States, as being geared towards the interests of developed States, and being inappropriate to serve their own needs and interests; De Waart, *(continued)*

on reciprocity to a law of non-reciprocal global action, from a law of efficient allocation of natural resources (effizienten Allokation von natürlichen Ressourcen) to an environmental protection law (Umweltschutzrecht) involving a co-operative management of nature⁽⁹⁾. Originally limited to the management and protection of specific shared environment media (water, air,...), inter-state co-operation has progressively extended to the management and protection of the so-called 'global commons'⁽¹⁰⁾, and recently to

'Permanent Sovereignty over Natural Resources as a Cornerstone for International Economic Rights and Duties', 14 *Netherlands ILJ* (1977), 304; Schrijver, 'The Dynamics of Sovereignty in a Changing World', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 5; see *supra* Chap. 2, Permanent Sovereignty Over Natural Resources, note 46 (CR).

⁽⁹⁾ Picone, 'Obblighi reciproci ed obblighi *erga omnes* degli stati nel campo della protezione internazionale dell'ambiente marino dall'inquinamento', in Starace (ed.), *Diritto internazionale e protezione dell'ambiente marino* (Giuffrè, 1983), 15, at 26, and remarks on the no transboundary harm principle as a rule of coexistence, with initially no particular environmental dimensions *supra*, Chap. 2/2 Objects of Permanent Sovereignty: From Mineral Resources to Environmental Policy, Chap. 2/4/ii/a. Equitable Utilisation, *Sic Utere Tuo* and Related No Substantial Transboundary Harm Principles and Chap. 2/4/ii/c. Limits Arising from General Environmental Considerations. Such distinction was originally adopted to describe the evolution of domestic environmental law; see Winter, 'Perspektiven des Umweltrecht', 13 *DVBl.* (1988), 659; it is equally suitable to describe the *general* evolution of international environmental law. See also Caldwell's distinction between the 'old' geopolitics, concerned with control over territory, natural resources and strategic locations, and 'newer' geopolitics, more concerned with the implications of national security and economy, health and quality of life; *International Environmental Policy* (Duke University Press, 1990), Chap. 1; 'The Geopolitics of Environmental Policy: Transnational Modification of National Sovereignty', 59 *Revista Jurídica de la Univerisdad de Puerto Rico* (1990), 693, at 694 *et sequ.*; and 'Beyond Environmental Diplomacy: the Changing Institutional Structure of International Cooperation', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 2; Caldwell focuses on the post-Stockholm development, and does not really consider Winter's 'allocation' phase. See further Beyerlin, 'Rio-Konferenz 1992: Begin einer globalen Umweltrechtsordnung?', 54 *ZöRV* (1994), 124, at 127; Dupuy, 'Humanité et environnement', XII *Annuaire de Droit Maritime & Aero-Spatial* (1993), 493; Hohmann, *Precautionary Legal Duties and Principles of Modern International Environmental Law* (Graham & Trotman/Martinus Nijhoff, 1994), 7-8; Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 1; Lang, 'Luft und Ozon - Schutzobjekte des Völkerrechts', 46 *ZöRV* (1986), 261. On the factors leading to the proliferation of international environmental law documents, see for instance Hahn & Richards, 'The Internationalization of Environmental Regulation', 30 *Harvard ILJ* (1989), 421. For a comprehensive view of the evolution of certain sectors of international environmental law, see for instance Pannatier, *L'antarctique et la protection internationale de l'environnement* (Schulthess Polygraphischer, 1994), Part I.

⁽¹⁰⁾ The expression refers to those areas or resources which, by their very nature, fall beyond the sovereign jurisdiction of States; it encompasses the oceans, Antarctica (although certain States do claim territorial jurisdiction), Outer space, and the atmosphere; Volger, *The Global Commons, A Regime Analysis* (John Wiley & Sons, 1995), at 2. Although regulatory regimes for certain global commons had already been enacted in the late 1950s, a turning point in the management of the global commons, traditionally subjected to a *res communis* type of regime open to free exploitation, was Hardin's famed 'apocalyptic metaphor of the selfish profit-maximising rationale of medieval herdsmen', conducive to the destruction of the common grazing land as a consequence of excessive population growth and pollution; see Hardin, 'The Tragedy of the Commons', 162 *Science* (1968), 1243, reprinted in Hardin & Baden, *Managing the Commons* (Freeman & Co, 1977), Chap. 3; the bracketed expression is inspired from Bretherton, 'Gender and Environmental Change, Are Women the Key to Safeguarding the Planet?', in Vogler & Imber (eds.), *The Environment & International Relations* (Routledge, 1996), Chap. 6, 107. Hardin's path-breaking article triggered an abundant literature; see for instance Crowe, 'The Tragedy of the Commons Revisited', 166 *Science* (1969), 1103, reprinted in Hardin & Baden, *op.cit.*, Chap. 8; Feeny *et al.*, 'The Tragedy of the Commons: Twenty-Two Years Later', 18 *Human Ecology* (1990), 1; Morse, 'Managing International Commons', 31 *JIA* (1977), 1. See also Caldwell, *International* (continued)

more general environmental issues considered to be the 'common concern of the whole of mankind'(11).

This Chapter is concerned with inter-state co-operation⁽¹²⁾ on 'global' environmental issues extending beyond the pure transboundary context⁽¹³⁾, constituting a common concern or common interest of mankind. In a first stage, it considers in what respect the global environmental partnership referred to in 1992 Agenda 21 and sporadically

Environmental Policy (Duke University Press, 1990), Chap. 8; Nanda, *International Environmental Policy* (Transnational Publishers, 1995), Chap. 2; Sooros, *Beyond Sovereignty: The Challenge of Global Policy* (University of South Carolina Press, 1986); Stone, 'Defending the Global Commons', in Sands (ed.), *Greening International Law* (Earthscan, 1993), Chap. 3; Vogler, *The Global Commons, A Regime Analysis*, *op.cit.*; Young, *International Cooperation: Building Regimes for Natural Resources and the Environment* (Cornell University Press, 1989).

(11) Such as loss of biodiversity, global warming, or deforestation. Whilst the management of global commons essentially involves States' actions beyond their sovereign jurisdiction with regard to resources beyond national jurisdiction, issues declared the common concern of mankind often involve States' action within their national jurisdiction, often, as in the case of forestry and biodiversity, with respect to resources under undisputed national jurisdiction; Wolfrum, 'Purposes and Principles of International Environmental Law', 33 *German YbIL* (1990), 308.

The largely rhetorical debate on scope and nature of the expressions of common heritage, common concern or common interest of mankind falls outside the ambit of this thesis. All three expressions are used here essentially in an attempt to differentiate the degree of commitment by States with respect to certain environmental issues, with no attempt being made to either endorse or refute any of them as the expression of a legal concept. For an extremely thorough and up-to-date study of the concepts in international law (with a strong albeit non exclusive focus on international environmental law), see Baslar, *The Concept of the Common Heritage of Mankind in International Law* (Kluwer Law International, 1998). For a brief outlook of the concept of common heritage in international environmental law, see Birnie & Boyle, 112; Boyle, 'International Law and the Protection of the Global Atmosphere', in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman / Martinus Nijhoff: 1991), Chap. 1; Fleischer, 'The International Concern for the Environment: The Concept of Common Heritage', in Bothe (ed.), *Trends in Environmental Policy and Law* (IUCN, 1980), 321.

(12) The partnership(s) in 1992 Agenda 21 and subsequent documents refer not only to the relations between, but also within States. Hence, reference to partnership is made in relation to some of 1992 Agenda 21's specific groups, namely indigenous peoples (26.3, 26.6), local authorities (28.4), NGOs (27.2, 27.5, 27.10(b), 27.11(a), 27.12), business and industry (30.2, 3.7, 3.23), and scientific and technological community (31.1, 31.4(b)). The 1995 Beijing Platform for Action the Advancement of Women refers to partnership in relation to women's involvement in the development and environment process (Para. 17). 'Intra-state' partnerships are considered in Chap. 6, Principles Pertaining to Public Participation. Part of the doctrine attribute an inter-temporal dimension to partnership, hence considering successive generations as partners; Brown Weiss, 'Our Rights and Obligations to Future Generations for the Environment', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 198; and 'Environmental Equity and International Law', in UNEP (ed.), *UNEP's New Way Forward: Environmental Law and Sustainable* (UNEP, 1995), Chap. 2, at 15. Such an inter-temporal or intergenerational partnership appear *prima facie* less realistic than an 'intra-generational' or an inter-States partnership, in that partnership, at least as understood in domestic law, rests upon a special fiduciary relationship between the partners and entails a sharing of obligations and responsibilities as well as benefits difficult to conceive between 'non-contemporaneous' actors; *infra* n. 21. The inter-temporal dimension of partnership is more particularly considered above at Chap. 4, Intergenerational Equity.

(13) On co-operation with respect of transboundary resources and resources under domestic jurisdiction exclusively, see *supra* Title 1, *supra*, on Territorial Integrity, Sovereignty and Permanent Sovereignty over Natural Resources.

mentioned in subsequent international environmental documents can be associated to or should be distinguished from the domestic institution of the same name. In the light of the controversy revolving around the implications of the common heritage of mankind, that is the closest formulation of partnership made so far in international law, most notoriously in the context of the Third Conference on the Law of the Sea⁽¹⁴⁾, it seems reasonable to conclude that States are far from ready to enter a genuine partnership to 'manage the global environment' in common and share both responsibilities and interests.

Based on the assumption that partnership reformulates, in fact, the necessity of global co-operation on environmental issues of common concern of mankind, such as atmospheric pollution, climate change, loss of biodiversity or deforestation, this Chapter endeavours to find out how far and on what terms both developed and developing countries are committed to co-operating. Contrary to early international environmental rules and to a certain number of 'regional' environmental rules applying among States that dispose of broadly similar financial and technological abilities, a 'global partnership towards sustainable development' would necessarily involve developed as much as developing States, and therefore entails a certain degree of assistance and co-operation. Behind such new attractive formula as partnership or common concern of mankind, the discourse revolves in fact around the same old parameters of financial and technical co-operation and assistance that were characteristic of the debates on the new international economic and marine orders.

The discussion in the context of the protection of the global environment, however, differs from that in the context of economic development (including deep seabed mining). Assistance, in the latter case, has been mostly considered as a matter of 'charitable action' for the sole benefit of recipient States. In the area of global environmental protection, by contrast, financial and technological assistance is viewed as a necessary preliminary and component to assure the essential contribution of developing States to address issues not only of their concern, but of the concern of

(14) And more generally the debate on a new international economic order, of which the common heritage of mankind concept in the context of the law of the sea is usually regarded as the most comprehensive expression at the international level; comment and references on the new international economic order ideology and the common heritage of mankind concept, *supra*, Chap. 2/2/ii. Sovereignty over Economic Assets and Policy in a New International Economic Order, and Chap. 5/2 Partnership in National and International Law.

The concept of common heritage was also used with regard to the moon and other celestial bodies, *infra* n. 48, the concept and associated mechanism however, have been more developed in the context of the law of the sea, and therefore provide a better case study. It must be noted that the US refused to ratify the 1979 Moon Treaty, although it had ratified the 1967 Space Treaty; as seen, the former incorporates the concept of common heritage of mankind in a more explicit and comprehensive way than the latter, directly in the text.

paper, their effective commitment to environmental action against developed States' commitment to appropriate financial and technological assistance to provide them with the means of fulfilling their commitments.

In practice however, despite the general recognition of the urgent need for common action with respect to certain environmental issues, the lack of a genuine sense of common interest (as opposed to individual interest) and, therefore, the lack of common benefit and common responsibility, has failed in the first attempt at 'bargained co-operation'. As particularly clearly summarised by Porter and Welsh Brown:

«Hopes for a North-South partnership approach depend on a recognition of mutual dependence and self-interest among countries, both North and South. The highly industrialized countries must accept the fact that they cannot solve environmental problems without the cooperation of the developing countries. The developing nations must recognize that they cannot pursue a sustainable development strategy without the cooperation of the partnership [sic] of the highly industrialized countries of the North.»⁽¹⁵⁾

2. Partnership in National and International Law

i. Domestic Institution of Partnership: the English Example

Partnership as an institution of domestic law⁽¹⁶⁾ is broadly defined as «a relation which subsists between persons carrying on a business in common with a view of a profit»⁽¹⁷⁾. A partnership is a loose association of persons or other legal entities, such as institutions, public or private companies, deprived of legal personality distinct from that of its members⁽¹⁸⁾. The following major features of partnership can be identified⁽¹⁹⁾:

- 1) Co-ownership: any 'property' of the partnership is, in fact, jointly held and administered by the partners⁽²⁰⁾.

⁽¹⁵⁾ *Global Environmental Politics* (Westview, 1991), at 152.

⁽¹⁶⁾ On the relevance of domestic institutions in international law, see *supra* Chap. 4/2. Environmental Fairness.

⁽¹⁷⁾ UK Partnership Act 1890, Sect. 1(1); generally on partnership law in the United Kingdom, see L'Anson Banks, *Lindley & Banks On Partnership*, 17th edn (Sweet & Maxwell, 1995) (hereafter referred to after the title); Morse, *Partnership Law*, 3rd edn (Blackstone, 1995) (hereafter referred to after the author); Prime & Scanlan, *The Law of Partnership* (Butterworths, 1995) (hereafter referred to after the authors).

⁽¹⁸⁾ As opposed to the company, which is a legal entity on its own, vested with most of the attributes of the legal personality. Partnership is translated in French with the expression of *société/association de personnes sans personnalité morale*, and company, *société commerciale* or *personne morale*; see *Navarre Economic and Legal Dictionary*, 4th edn (LGDJ, 1995), 535.

⁽¹⁹⁾ UK Partnership Act 1890, Sect. 1; see *Lindley & Banks On Partnership*, Chap. 5.

⁽²⁰⁾ UK Partnership Act 1890, Sect. 20-21; *Lindley & Banks On Partnership*, Chap. 18; Prime & Scanlan, Chap. 9.

- 1) Co-ownership: any 'property' of the partnership is, in fact, jointly held and administered by the partners⁽²⁰⁾.
- 2) Co-benefit: each partner is in a fiduciary relationship with the co-partners, viz. under a certain duty of loyalty to them⁽²¹⁾. He has for instance to disclose to his co-partners, honestly and in good faith, all matters concerning the partnership⁽²²⁾, and has no exclusive right to personal profit derived from any transaction concerning the partnership⁽²³⁾.
- 3) Co-responsibility: «each partner is an agent of his fellow partners simply by virtue of the relationship»⁽²⁴⁾; accordingly, any wrongful action or omission of the one partner acting within the limits of the fiduciary relation (*i.e.* the ordinary course of the business or with the authority of co-partners) engages *prima facie* the unlimited joint and/or several liability of the others⁽²⁵⁾.

Clearly, the implications of the domestic institution of partnership go beyond a mere co-operation between the partners; they involve a large degree of sharing of ownership, benefits, and responsibilities, and imply a sense of solidarity between the partners. Apart from cases of transnational partnerships, which remain an institution of private (international) law, no such institution as partnership exists in international law⁽²⁶⁾. In this respect, the references contained in 1992 Agenda 21 are innovative⁽²⁷⁾. A closer look

(20) UK Partnership Act 1890, Sect. 20-21; *Lindley & Banks On Partnership*, Chap. 18; Prime & Scanlan, Chap. 9.

(21) Prime & Scanlan, at 170; also *Thompson's Trustee v. Heaton*, [1974] 1 WLR 605, at 613. Moffat defines the term 'fiduciary' as «an abstract term, but one possessing a 'core' meaning, namely that the person in that position is under a duty of loyalty to some other person or body. This duty is then translated into a fundamental legal principle that a fiduciary should not allow his personal interest to conflict with that duty»; *Trusts Law, Text and Materials*, 2nd edn (Butterworths, 1994), 545. Moffat underlines however that the partnership fiduciary relationship is more of a 'collaborative fiduciary relationship', in the sense that «[it] is born out of the mutual trust and confidence between parties combining for common end and are roughly equal in status», whilst a typical fiduciary relationship is characterised by the unequal status of the parties; *ibid.* 547.

(22) UK Partnership Act 1890, Sect. 28; Morse, at 112; Prime & Scanlan, Chap. 16.

(23) UK Partnership Act 1890, Sect. 29; *Lindley & Banks On Partnership*, Chap. 16; Prime & Scanlan, at 172.

(24) UK Partnership Act 1890, Sect. 5-8; Morse, at 74.

(25) UK Partnership Act 1890, Sect. 10 to 12, provides for the joint and several liability of partners for torts, frauds, and the misappropriation of money and property; *Lindley & Banks On Partnership*, Chap. 12 and 13; Morse, at 90; Prime & Scanlan, at 135.

(26) There is no Chapter on partnership, and no reference in the index in Bernhardt (ed.), *Encyclopedia of Public International Law*, neither is there any mention in Lauterpacht's albeit non exhaustive study on the analogies between public international law and private domestic law; *Private International Law Sources and Analogies of International Law, with Special Reference to International Arbitration* (Archon Books, 1970).

(27) Reference to domestic institutions in international law is commonplace. Generally on the relevance of domestic institutions in international law, see *supra* Chap. 4/2. Environmental Fairness.

at these international references, however, reveals a rather loose conception of partnership. One of the most comprehensive definition in 1992 Agenda 21 reads as follows:

« In order to meet the challenges of environment and development, States have decided to establish a new global partnership. This partnership commits all States to engage in a continuous and constructive dialogue, inspired by the need to achieve a more efficient and equitable world economy, keeping in view the increasing interdependence of the community of nations (...) It is recognised that, for the success of this new partnership, it is important to overcome confrontation and to foster a climate of genuine cooperation and solidarity. It is equally important to strengthen national and international policies and multinational cooperation to adapt to the new realities.»⁽²⁸⁾

In similar terms, the 1993 ECE Lucerne Declaration provides that the partnership between Central and Eastern Europe, and Western Europe on environmental issues «should include cooperation between different levels of government, local authorities, local financial institutions, private industry, and the indispensable participation of the informal sector»⁽²⁹⁾. Leaving aside, for the moment, the question of the identity of the partners, there is no indication that partnership mentioned in international legal instruments is understood as entailing a degree of sharing of ownership, responsibilities and benefits.

The closest reference to the domestic institution at the international level is contained in 1992 Agenda 21, with regard to popular participation in desertification control: « [I]t is necessary to go beyond the active popular involvement, rooted in the concept of partnership. This implies the sharing of responsibilities and the mutual involvement of all parties»⁽³⁰⁾. Likewise, the comment to the preambular reference to partnership in 1995 IUCN Draft International Covenant of Environment and Development provides that «'partnership' is based upon the existing fundamental obligation between States (...) implying a greater interdependence and joint responsibility for the well-being of all»⁽³¹⁾. As Bachelet rightly points out, under a real environmental partnership, any State or international organ would be justified to intervene in the management of the object of the partnership for the purpose of protecting it; «l'ingérence [écologique] est donc licite et plus exactement il n'y a plus d'ingérence, mais un contrôle légitime de la part d'un partenaire qui s'estime lésé dans l'exécution, ou plus exactement, l'inexécution d'un engagement entre États» ⁽³²⁾.

(28) Para 2.1.

(29) Para. 9.2.

(30) Para. 12.55.

(31) At p. 26-27 (notes omitted).

(32) *L'ingérence écologique*, at 205; see remarks on *erga omnes* obligation to protect the environment, (continued)

Quite the contrary, the 'international conception' of partnership appears closer to give-and-take co-operation and assistance between various States, and between the various sectors and levels of the State. Some authors, whilst recognising that the 'partnership' referred to in international environmental law cannot be assimilated to the domestic institution, find nonetheless certain features of the latter in the former, like for instance the equal participation of the partners, the common but differentiated responsibility⁽³³⁾.

At least three sets of arguments can be invoked in support of such an understanding of partnership in international law:

- 1) The 1992 Rio Declaration on Development and Environment expressly links the concept of partnership and the concept of international co-operation, urging the establishment of a new global partnership 'through the creation of new levels of cooperation among States, key sectors of societies and people'⁽³⁴⁾.
- 2) The majority of environmental documents adopted since the 1992 Rio Conference on Development and Environment are worded in terms of co-operation⁽³⁵⁾, occasionally in terms of assistance⁽³⁶⁾, but rarely refer to partnership as such. When reference is made to partnership, (a) it is often associated with the general objective of the promotion of sustainable development rather than with more specific obligations, and (b) it is commonly included in the title or the preamble of the documents, whilst more detailed provisions on specific issues remain worded in terms of co-

supra Chap. 2/4/c. Limits Arising from General Environmental Considerations. The partnership(s) referred to in 1994 Desertification Convention, Art. 18, are also closer to the domestic institution.

(33) See for instance Chengyuan, 'Legal Aspects of the Global Partnership Between North and South', in Al-Nauimi & Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, 1995), 203.

(34) Preambular Para. 3; see also UNSG Report to the Commission on Sustainable Development on *Rio Declaration on the Environment and Development: application and implementation*, E/CN.17/1997/8, 10 February 1997, Para. 44. Similar link is contained *inter alia* in 1995 OECD Policy Statement on Sustainable Development, section entitled Partners in Cooperation: Resources; 1994 Miami Declaration of Principles, referring to co-operative partnerships to strengthen the capacity to prevent and control pollution; 34 *ILM* (1995), at 813; 1990 Strategy for the Fourth Development Decade, Para. 16.

(35) See *inter alia* 1992 Climate Change Convention, preambular Para. 6, and Art. 3(5); 1992 Biodiversity Convention preambular Para. 14 and Art. 5; 1992 Forestry Principles. See also various declarations issued in the running to Rio Conference: 1989 Sofia Recommendations on the Protection of the Environment, Part I, Para. 3; 1990 Bangkok Ministerial Declaration on Sustainable Development; 1990 Bergen Ministerial Declaration on Sustainable Development, Para. 18, 19, 20; 1991 Beijing Ministerial Declaration on Environment and Development, Preamble; 1991, Tlatelolco Platform on Environment and Development, Para. 16. On the other hand, references to co-operation in a spirit of partnership and partnership arrangements are made in the 1994 Desertification Convention, Arts. 2(1), 3(b) and (c), and Annex I, Art. 18. One should note that 1989 Resolution 44/228, on United Nations Conference on Environment and Development, setting the premises upon a global partnership must be built under 1992 Agenda 21 (see preamble of that Agenda) is exclusively worded in terms of Cooperation and contains no mention of partnership as such.

(36) See for instance 1989 Hague Declaration on the Environment, Para. 7.

operation⁽³⁷⁾. In a general way, the definition of partnership which can be inferred from the various references thereto is closer to some form of multi-level, cross-sectoral co-operation than it is to the domestic institution of partnership⁽³⁸⁾. At a meeting of the Intergovernmental Negotiating Committee for the Convention to Combat Desertification in January 1997, the G77 stated that «the test of partnership called for in the Convention lies in the mobilisation of sufficient financial resources, provision of new and additional funding, and the transfer of ecologically sound technologies»⁽³⁹⁾.

3) The lack of consistency between the English and French versions of the 1992 Agenda 21 is yet another factor against the assimilation of international partnership with the domestic institution⁽⁴⁰⁾. The term *association*, the accurate French translation of the legal (domestic) institution of partnership⁽⁴¹⁾, is used in the French version in less than half of the cases where the English version resorts to the term of partnership⁽⁴²⁾; in the other cases, and with no apparent reason justifying such distinction, partnership is loosely translated as *participation*⁽⁴³⁾ or more literally as *partenariat*⁽⁴⁴⁾.

(37) See for instance, 1994 Miami Declaration of Principles, issued at the Summit of the Americas, entitled *Partnership for Development and Prosperity: Democracy, Free Trade and Sustainable Development in the Americas*; 1994 CSCE Budapest Summit Declaration, entitled *Towards a Genuine Partnership in a New Era*. One could also mention a series of bilateral 'environmental' or 'global partnership agreements' passed between the US and various countries, all closer to mutual co-operation and assistance than to relations of partnership in the legal sense, and involving some training programmes, financial assistance, and technical co-operation; see for instance US-Asia Environmental Partnership, 4 January 1992, reproduced in 3 *Department of State Dispatch* (1992), 22; Tokyo Declaration on US-Japan Global Partnership, 9 January 1992, in *ibid.*, at 44; Enhanced US-Turkish Partnership, 11 February 1992, in *ibid.* at 109; Declaration on US-Ukrainian Relations: Building A Democratic Partnership, 6, May 1992, *ibid.*, at 366; Democratic Partnership between the US and Russia, a April 1993, in 4 *Department of State Dispatch* (1993), 225; Partnership with South Africa, 6 October 1994, in 5 *Department of State Dispatch* (1994), 723; Partnership Progress in Haiti, 7 October 1994, *ibid.*, 697; US-Australia Environmental Partnership, 26 July 1996, in 7 *Department of State Dispatch* (1996), 396.

(38) See *supra* i. Domestic Institution of Partnership: the English Example.

(39) As reported in 27 *EPL* (1997), 88.

(40) The lack of coherence in the use of terms to translate a same concept used in the same context, as it is the case for partnership, is also an indication of the political, sometimes extremely rhetorical, nature of 1992 Agenda 21.

(41) See *Navarre Economic and Legal Dictionary*, 4th edn (LGDJ, 1995); Lindbergh, *International Law Dictionary* (Blackstone, 1992); *Le Robert & Collins, Le Petit Robert Bilingue*, 2nd edn (Dictionnaires Le Robert, 1990).

(42) See Paras. 7.77(b), 26.6, 31.4(b), 34.4, 34.5, 34.16, 34.19, 34.26(b), 36.5(c) and (i), 40.29. Partnership is occasionally translated as *liens d'association*, an expression not commonly used in legal or ordinary French; see Paras. 7.4, 7.9(e).

(43) Paras. 30.2, 30.23 (accords de participation).

(44) The term of *partenariat*, albeit increasingly used in written and spoken French, in legal and ordinary
(continued)

Besides, should an international parallel exist with the domestic institution of partnership, its actual efficiency, at least in the area of environmental management and protection, would be particularly doubtful considering the lack of real joint commitment and perceived common interests in making it work, where necessary in disregard of individual national interests.

ii. Partnership-like Concept in International Law: the Case of the Common Heritage of Mankind

The closest international formula to the domestic institution of partnership would be the very controversial common heritage of mankind, introduced in the international legal vocabulary in the late 1960s, nearly simultaneously in the context of the space and law of the sea negotiations⁽⁴⁵⁾. Beyond the large degree of uncertainty as to what are the

contexts (see for instance Bachelet, *L'ingérence écologique* (Frison-Roche, 1995), at 207), has not (yet) been formally accepted as part of the official language; ordinary or legal dictionaries only recognise the term of *partenaires* also derived from English; see for instance *Le Petit Robert* Vol. 1 (Dictionnaires Le Robert, 1989). The only reference to *partenariat* was found in an English edited dictionary: *Oxford-Hachette French Dictionary* (Oxford University Press, 1994). Partnership is translated as *Partenariat* at Paras 1.1, 1.2, 1.6, 2.1, 7.30(d), 12.55, 12.56(b), 13.18(c), 20.18(c), 23.4, 27.10(b), 27(11), 28.4, 31.1, 33.9, 34.14(e). All references to partnership in 1992 Rio Declaration on Human Environment and Development are translated as *partenariat*; Preambular, and Princ. 7 and 21.

(45) Argentinean Ambassador to the United Nations Cocca used the expression speaking before United Nations Committee on Outer Space; Committee on the Peaceful Uses of Outer Space, Legal Subcommittee, Summary Record of the 75th Meeting, UN Doc.A/AC.105/C.2/SR.75 (1968), at 7-8, referred after Cocca, 'The Advances In International Law Through the Law of Outer Space', 9 *Journal of Space Law* (1981), 13, at 15. Two months later, on 17 August 1967, Malta's Ambassador to the United Nations delivered to the Secretary General, on the behalf of his country, a *note verbale* entitled *Declaration and Treaty Concerning the Reservation Exclusively for Peaceful Purposes of the Seabed and of the ocean Floor, Underlying the Seas Beyond the Limits of Present National Jurisdiction, and the Uses of their Resources in the Interests of Mankind*, UN Doc.A/6695; see also Pardo's speech at UNGA's First Committee, 1 November 1967, A/C.1/PV.151; references after Brown, 'Neither Necessary Nor Prudent at this Stage: the Regime of Seabed Mining and its Impact on the Universality of the United Nations Convention on the Law of the Sea', 17 *Marine Policy* (1993), 81, at 82 n. 12. For rationale behind Malta's action: Pardo, 'The Emerging Law of the Sea', in Walsh (ed.), *The Law of the Sea: Issues in Ocean Resources Management* (Praeger, 1977), 33, at 36; Pardo, 'Law of the Sea- What Went Wrong', in Friedheim (ed.), *Managing Ocean Resources, A Primer* (Westview, 1979), Chap. 9, at 139. The principle of exploitation of the seabed and ocean floor for the common benefit of mankind was put on UN Agenda in the late 1960s, see Res. 2340 (XXII), 18 December 1967; Res. 2467 (XXIII), 21 December 1968; Res. 2574 (XXIV), 15 December 1969; it was solemnly set forth as an international principle in Resolution 2749 (XXV), 17 December 1970, adopted with 108 votes with no opposition, and 14 abstentions (the group of socialist States, except Yugoslavia), and reiterated in the 1975 Economic Charter (Art. 29); on the Soviet position, see Joyner, 'Towards a Legal Regime for the International Seabed, the Soviet Union Evolving Perspective', 15 *Virginia JIL* (1975), 871.

The literature on the common heritage of mankind is voluminous, reflecting the degree of controversy surrounding the concept; see for instance: Danilenko, 'The Concept of Common Heritage of Mankind in International Law', 13 *Annals of Air & Space Law* (1988), 247; Kiss, 'La Notion de Patrimoine Commun de l'Humanité', 175 *RdC* (1982-II), 99; De Klemm, 'Le patrimoine naturel de l'humanité', in Dupuy (ed.) *The Future of International Law of the Environment*, Workshop 1984, (Martinus Nijhoff, 1985), 117; Riphagen, 'The International Concern or the Environment as Expressed in the Concepts of the "Common Heritage of Mankind" and of "Shared Natural Resources"', in Bothe (ed.), *Trends in Environmental Policy and Law* (IUCN, 1980), 343; Sucharitkul, 'Évolution continue d'une notion nouvelle: le patrimoine commun de l'humanité', in Dinstein (ed.), *International Law at a Time of (continued)*

scope⁽⁴⁶⁾ and the legal status of the common heritage of mankind⁽⁴⁷⁾ and which elements qualify as such under international law⁽⁴⁸⁾, there seems to be a general consensus on the following basic constitutive characteristics of the concept⁽⁴⁹⁾:

Perplexity: Essays in Honour of Shabtai Rosenne (Nijhoff, 1989), 887; White, 'The Common Heritage of Mankind: An Assessment', 14 *Case Western Reserve JIL* (1982), 509; Wolfrum, 'The Principle of Common Heritage of Mankind', 43 *ZaöRV* (1983), 312. For further references and a thorough appraisal of the concept, see Baslar, *The Concept of the Common Heritage of Mankind in International Law* (Kluwer Law International, 1998), Ph.D manuscript, Part I.

(46) Dolman, *Resources, Regimes and World Order* (Pergamon Policy Studies, 1981); Goldie, 'A Note on Some Diverse Meanings of the Common Heritage of Mankind', 10 *Syracuse JIL & Commerce* (1983), 69; Myers, 'Is There a «Common Heritage of Mankind»?', *Proceedings of the 31th Colloquium on the Law of Outerspace* (1990), 335; Porritt, 'The Common Heritage: What Heritage, Common to Whom?', 1 *Environmental Values* (1992), 256.

(47) Arnold, 'Common Heritage of Mankind as a Legal Concept', 9 *International Lawyer* (1975), 153; Brown, 'The Consequences of Non Agreement', in Alexander, *The Law of the Sea: A New Geneva Conference*, Proceedings of the Sixth Conference of the Law of the Sea Institute, University of Rhode Island, Rhode Island, Kingstone, 21-24 June 1971, 14, at 16 *et sequ*; Danilenko, 'The Concept of Common Heritage of Mankind in International Law', 13 *Annals of Air & Space Law* (1988), 247; Gorove, 'The Concept of the Common Heritage of Mankind; A Political, Moral, and legal Innovation?', 9 *San Diego LR* (1972), 390; van Hoof, 'Legal Status of the Concept of the Common Heritage of Mankind', 7 *Grotiana New Series* (1986), 49, at 56 *et sequ*.; Joyner, 'Legal Implications of the Concept of Common Heritage of Mankind', 35 *ICLQ* (1986), 190; Kewenig, 'Common Heritage of Mankind - politischer Slogan oder völkerrechtlicher Schlüsselbegriff?', in von München (ed.), *Staatrecht-Völkerrecht-Europarecht: Festschrift für Hans-Jürgen Schlochauer* (Walter de Gruyter, 1981), 235; Larschan & Brennan, 'The Common Heritage of Mankind Principle in International Law', 21 *Columbia JTL* (1983), 305; Song, 'Common Heritage of Mankind as a Customary International Norm', 8 *Korea World Affairs* (1984), 665; Wolfrum, *supra* n. 45; see also *infra* n.74.

(48) Formally only the moon and its resources and the deep seabed are have been declared common heritage of mankind; see 1979 Moon Treaty, Art. 11; 1982 UNCLOS, Art. 136, and 1994 UNCLOS Agreement Relating to the Implementation of Part XI, Preambular Para. 2. The 1967 Outer Space Treaty is less clear-cut, and whilst it provides that the moon and other celestial bodies are 'only' *the province of mankind* (Art. 1), it sets forth a regime for outer space similar to that subsequently adopted in the 1979 Moon Treaty; see Christol, 'Province of Mankind Concept', in Christol, *Space Law: Past, Present and Future* (Kluwer Law & Taxation Deventer, 1991), 67. The 1981 *African Charter on Human and Peoples' Rights*, Art. 22(1) recognises the equal enjoyment of the common heritage of mankind as a right of all peoples; it gives no further precision however, as to what common heritage of mankind encompasses.

A Malaysian attempt failed, in 1982, to have the Antarctic proclaimed common heritage of mankind; both the 1988 CRAMRA and the 1991 Antarctic Treaty Environmental Protocol avoid any direct analogy with 1982 UNCLOS or 1979 Moon Treaty, and provide that the development of a comprehensive regime for the protection of the Antarctic environment is 'in the interest of mankind' (preambular Para. 7). No provision is made for an equitable sharing of benefit; see Boyle, 'From Sovereignty to Common Heritage: International Law for Antarctica', 25 *Texas JIL* (1990), 309, at 312; Charney, 'The Antarctic System and Customary International Law', in Francioni & Scovazzi (eds.), *International Law for Antarctica*, 2nd edn (Kluwer Law International, 1996), Chap. 3; Chopra, 'Antarctica as a Commons Regime: A Conceptual Framework for Cooperation and Coexistence', in Joyner & Chopra (eds.), *The Antarctic Legal Regime* (Nijhoff, 1988), 163; Francioni, 'Antarctica and the Common Heritage of Mankind', in Francioni & Scovazzi (eds.), *International Law for Antarctica* (Giuffrè, 1987), 101; Herber, 'The Common Heritage Principle: Antarctica and the Developing Nations', 50 *American Journal of Economics and Sociology* (1991), 391; Keyuan, 'The Common Heritage of Mankind and the Antarctic Treaty System', 38 *Netherlands ILR* (1991), 173; Suter, *Antarctica: Private Poverty or Public Heritage?* (Zed Books, 1991); Hussain, 'The Antarctic: Common Heritage of Mankind?', in Verhoeven *et al.* (eds.), *The Antarctic Environment and International Law* (Graham & Trotman/Martinus Nijhoff, 1992), Chap. 12; Pannatier, *supra* n. 9, Part II; Suy, 'Antarctica: Common
(continued)

- (1) non appropriation⁽⁵⁰⁾;
- (2) international management⁽⁵¹⁾;

Heritage of Mankind?', *ibid.*, Chap. 13.

Other candidates to the qualification of common heritage of mankind include: the atmosphere, *infra* n. 101 ; biodiversity, see *infra* n. 103; the tropical forests, see *infra* n. 104; the world food resources, see Bedjaoui, 'Are the World's Food Resources the Common Heritage of Mankind?', 24 *Indian JIL* (1984), 459; solar energy, see Rosenfield, 'Solar Energy "The Common Heritage of Mankind"', *Proceedings of the 21st Colloquium on the Law of Outer Space* (1978), 58; technology, *infra* n. 161; or cultural heritage, see 1966 UNESCO Declaration of the Principle of International Cultural Cooperation, which provides, in its first article, that «all cultures form part of the common heritage of mankind belonging to mankind»; UNESCO, General Conference Resolutions, 14th Session, 4 November 1966; referred after Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity* (United Nations University Press/Transnational Publisher, 1989), at 25 n. 26; also 1994 Draft United Nations Declaration on the Rights of Indigenous Peoples affirms in general terms that «the diversity and richness of civilizations and cultures (...) constitute the common heritage of humankind»; preambular Para. 2. For some consideration on certain animal species as 'common heritage of mankind', see Maffei, *La protezione internazionale delle specie animali minacciate* (CEDAM, 1992), at 350 *et sequ.* Other suggested elements of common heritage of mankind are reviewed in Cocca, 'The Law of Mankind : Ius Inter Gentes Again', 12 *Annuaire de Droit Maritime & Aero-Spatial* (1993), 507, at 532 *et sequ.*

(49) The reservation for peaceful purposes is also generally regarded as an element of the common heritage of mankind (see 1979 Moon Treaty, Art. 3(1); 1982 UNCLOS Arts. 141 and 143) but is of a lesser relevance for our purpose. These essential elements of the common heritage concept were clearly singled out by the Maltese Ambassador to the United Nations, Arvid Pardo, as he proposed to replace the customary principle of freedom of the seas by the principle of common heritage of mankind; see Pardo, 'Law of the Sea- What Went Wrong', in Friedheim (ed.), *Managing Ocean Resources, A Primer* (Westview, 1979), Chap. 9, at 139. Pardo suggested equally that the common heritage implied the reservation for future generations, although that latter dimension has been largely overshadowed by the discussions over the inter-spatial dimension of common heritage of mankind. See also Baslar, *The Concept of the Common Heritage of Mankind in International Law* (Kluwer Law International, 1998), Ph.D manuscript, at 100 *et sequ.*; Birnie & Boyle, 120 *et sequ.*; Boyle, *supra* n. 11; Goedhuis, 'Some Recent Trends in the Interpretation and the Implementation of the Rules of International Space Law', 19 *Columbia JTL* (1981), 213. An interesting parallel is sometimes drawn between the common heritage regime and the socialist concept of social ownership, both characterised by the element of non appropriation, participatory management and sharing of benefit; see Serracino Inglott, 'The Rights of Future Generations: Some Socio-Philosophical Considerations', in Busuttil *et al.* (eds.), *Our Responsibilities Towards Future Generations, A Programme of UNESCO and the International Environment Institute* (Foundation for International Studies & UNESCO, 1990), 17, at 23.

(50) The common heritage of mankind is open to free access by all States, but is not susceptible of individual ownership or other sort of monopoly, or as Pardo & Christol put it, 'interdependence founded on a sense of sharing' should predominate over 'an anachronistic divine right of grab'; *supra* n. 47, at 658. See 1979 Moon Treaty, Art. 11(2) and (3); 1982 UNCLOS Art. 137(3) in conjunction with Art. 153. In his separate opinion in the *Fisheries Jurisdiction* cases, Judge Castro made it clear that «la haute mer n'est pas *res nullius* que le premier occupant ou le plus fort puisse s'approprier. Elle appartient à la communauté des peuples ou à l'humanité (...) son usage appartient également à tous les peuples»; *Fisheries Jurisdiction (United Kingdom v. Iceland, Federal Republic of Germany v. Iceland)*, *Merits*, *ICJ Rep.* 1974, 3, (sep.op.), at 97. Some authors prefer the term of non exclusive use to that of non appropriation, which they regard as a barrier to the extension of the common heritage approach to areas within the domestic jurisdiction, like tropical forests; see Baslar, *The Concept of the Common Heritage of Mankind in International Law* (Kluwer Law International, 1998), Ph.D manuscript, at 103 *et sequ.* and references contained therein. In this respect, the common heritage of mankind 'partnership' distinguishes itself from the domestic institution of partnership, the latter entailing ownership.

(51) 1979 Moon Treaty, Art. 11(5) and (6), provides for an international regime, leaving to the discretion of States Party to decide of a mechanism of enforcement of such regime once the exploitation of the moon and celestial bodies has become feasible; see Wolfrum, *supra* n. 45, at 335; 1982 UNCLOS Art. 156, on (continued)

(3) equitable sharing of benefits derived from the exploitation of the common heritage of mankind, regardless of States' ability to contribute to the actual exploitation, *i.e.* capital and technologies⁽⁵²⁾.

An active sharing of the benefit implies, in Pardo's words, «...not only financial but also benefits derived from shared management and transfer of technology, thus radically transforming the conventional relationships between states and traditional concepts of development aid»⁽⁵³⁾. The two latter characteristics distinguish the common heritage of mankind from the traditional *res communis*:

«While *territorium extra commercium* [or *res communis*] and *territorium commune humanitatis* [or CHM] shared the same characteristic that they cannot be territorially appropriated by any State, they differ in that the former is essentially a negative concept, whereas the latter is a positive one. In the former, in time of peace (...) general international law allows [the State] to use the area or even to abuse it more or less as it wishes, including the appropriation of its natural resources (...). The emergent concept of common heritage of mankind, on the other hand, while it still lacks precise definition, wishes basically to convey the idea that the management, exploitation and distribution of the natural resources of the area in question are matters to be decided by the international community (...) and are not to be left to the initiative and discretion of individual States or their nationals.»⁽⁵⁴⁾

Environmental considerations were clearly a 'peripheral issue in the formulation of the common heritage of mankind'⁽⁵⁵⁾ which Brownlie qualifies as a «formula for exploitation, defining who [has] the right to exploit, [rather] than a concept for the conservation and preservation of the common heritage»⁽⁵⁶⁾. Nevertheless, even though

the contrary, sets up an international mechanism the International Seabed Institution, a sort of global environmental authority to manage the deep seabed on behalf of mankind, and guarantee an equitable sharing of financial and economic benefits derived from the area, as provided under 140(2).

⁽⁵²⁾ Herber, 'The Common Heritage Principle: Antarctica and the Developing Nations', 50 *American Journal of Economics and Sociology* (1991), 391, at 392; Juda, 'UNCLOS III and the New International Economic Order', 7 *ODIL* (1979), 221, at 228; Birnie & Boyle, 120; 1979 Moon Treaty, Art. 11(7)(d); 1982 UNCLOS Art. 140(2); both Conventions provide for equitable sharing with due consideration for the needs of developing States.

⁽⁵³⁾ Pardo, 'Law of the Sea- What Went Wrong', in Friedheim (ed.), *Managing Ocean Resources, A Primer* (Westview, 1979), Chap. 9, at 141.

⁽⁵⁴⁾ Cheng, 'The Legal Regime of Airspace and Outer Space: The Boundary Problem, Functionalism versus Spatialism: The Major Premises', 5 *Annals of Air & Space Law* (1980), 323, at 337.

⁽⁵⁵⁾ Ramakrishna, 'North-South Issues, Common Heritage of Mankind and Global Climate Change', 19 *Millennium* (1990), 429, at 435. And indeed, all but one implication of common heritage of mankind relates to the equitable exploitation and equitable distribution of the benefit of exploitation, with no real concern for environmental issues. The only environmental dimension flows from the reference to future generations; *supra* n. 49.

⁽⁵⁶⁾ 1981 ASIL meeting on 'The Protection of the Global Heritage', 75 *ASIL Proc.* (1981), at 53; see also Birnie, *ibid.*, at 53-54; see also de Klemm, 'Le Patrimoine Naturel de l'Humanité', in Dupuy (ed.), *The Future of International Law of the Environment*, Workshop 1984, (Martinus Nijhoff, 1985), 117, at 139. In this respect, common heritage of mankind, like the community of interests of riparian States (see *infra* Title 1, Territorial Integrity, Sovereignty and Permanent Sovereignty over Natural Resources) would appear more of a rule of allocation of natural resources than a rule of conservation. Some authors on (*continued*)

the relevance and effectiveness of the common heritage of mankind concept to environmental protection of global commons remains open to question, the concept as originally construed in the 1982 UNCLOS with regard to the deep seabed resources is, in theory, the most developed application of fiduciary relationship in international law⁽⁵⁷⁾. Accordingly, the position adopted by States and most importantly technologically advanced States, during the negotiation of the principle in the context of the law of the sea is, albeit indirectly, indicative of their position towards a real partnership to manage, exploit or indeed conserve common environmental resources or the global environment.

iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership⁽⁵⁸⁾

The following key features of the 1982 UNCLOS regime for deep seabed mining suggest a certain analogy with the domestic institution of partnership:

- (1) The common management of the deep seabed by an intergovernmental body (the Authority) acting as some sort of 'agent of humanity'⁽⁵⁹⁾ and applying decision-

the contrary consider that the common heritage of mankind is mainly a 'concept of conservation'; Brown Weiss, 'The Planetary Trust : Conservation and Intergenerational Equity', 11 *Ecology LQ* (1984), 495, at 554; Kiss, 'Conserving the Common Heritage of Mankind', 59 *Revista Jurídica de la Univerisdad de Puerto Rico* (1990), 773, at 776. To a certain extent however, the 1994 UNCLOS Agreement Relating to the Implementation of Part XI has reinforced the conservation measures of the original regime. On the other hand, it must be underlined that the common heritage of mankind concept in the context of the law of the sea applies exclusively to non-living (mineral) resources (see definition of the 'Area and its resources', 1982 UNCLOS Art. 133(a) and 136); accordingly, the 'riotisation' of the Law of the Sea, via the adoption documents geared towards the protection of environmental resources as much as their exploitation (see 1995 Straddling Fish Stocks Agreement), had no impact on the common heritage of mankind concept.

(57) Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity* (United Nations University Press/Transnational Publisher, 1989), Chap. III; Kiss, 'La Notion de Patrimoine Commun de l'Humanité', 175 *RdC* (1982-II), 99, at 128 *et sequ.*

(58) On the concept of common heritage of mankind in the specific context of the law of the sea negotiations, see *inter alia* Beer-Gabel, 'L'exploitation du fonds des mers dans l'intérêt de l'humanité: chimère ou réalité?', 81 *RGDIP* (1977), 167; Goldwin, 'Le droit de la mer: sens commun contre «patrimoine commun»', 89 *RGDIP* (1985), 719; Hossain (ed.), *Legal Aspects of the New International Economic Order* (Frances Pinter/Nichols Publishing Company, 1980), Part III; Imnadze, 'Common Heritage of Mankind: A Concept of Cooperation in Our Interdependent World?', Kuribayshi & Miles (eds.), *The Law of the Sea in the 1990s: A Framework for Further International Cooperation* (The Law of the Sea Institute, University of Hawaii, 1992), 312; Li, *The Transfer of Technology for Deep Sea-Bed Mining, the Law of the sea Convention and Beyond* (Martinus Nijhoff, 1994); Mahmoudi, *The law of Deep-Sea Bed Mining* (Almqvist & Wiksell International, 1987), Chap. 4; Pardo & Christol, *supra* n. 47; Schmidt, *Common Heritage or Common Burden?* (Clarendon, 1989); Scovazzi, 'Fondi marini e patrimonio comune dell'umanità', 67 *Rivista di Diritto Internazionale* (1984), 249; Schrijver, 'Permanent Sovereignty over Natural Resources versus the Common Heritage of Mankind', in De Waart *et al.* (eds.), *International Law and Development* (Martinus Nijhoff, 1988), 87; Wolfrum, *supra* n. 45.

(59) Mahmoudi, *supra* n. 58, at 181.

making procedures reflecting the interests of the majority of contracting States and not only those of a mighty minority⁽⁶⁰⁾.

- (2) The common exploration and exploitation of the deep seabed area in the benefit of mankind as a whole⁽⁶¹⁾. The exploitation would be planned and controlled by the Authority, and carried out on the ground concurrently by:
- the 'operating mining arm' of the Authority, viz. the Enterprise, and
 - individual contractors licensed by the Authority⁽⁶²⁾.
- (3) The fair and equitable redistribution of financial and other economic benefits derived from seabed mining activities to all contracting parties⁽⁶³⁾, including the transfer of

(60) A major controversy arose in respect of the role and power of the Assembly and of the Council, two main organs of the Authority. The G77 envisioned the Assembly, the sole organ composed of all Member States, taking decisions on the basis of a one-State one-vote procedure, as the supreme policy-making organ of the Authority, whilst the Council would be a mere executive organ with no actual independent power. On the contrary, technologically advanced States, outnumbered by developing States in the Assembly, maintained their position that no single organ should dominate; see Adede, 'The Group of 77 and the Establishment of the International Sea-Bed Authority', 7 *ODIL* (1979), 31. The Assembly, sole organ of the Authority where all States Party are represented, was finally formally recognised the supreme organ of the Authority (although the qualification of policy-making was eventually dropped; Art. 160); in practice however, the 36-Member strong Council is the most powerful organ, vested with very broad administrative powers; under the original regime, the Council was to take its decision by consensus or qualified majority depending the issue (Art. 161); see Larschan & Brennan, *supra* n. 47, at 323. See also Mann-Borgese, 'The Role of the International Seabed Authority in the 1980's', 18 *San Diego LR* (1981), 395.

(61) Arts. 140(1) and 155(2).

(62) Art. 153(2), and Part XI, Sect. 3; the original idea of Latin American States, at the source of the concept of the Enterprise, was to reserve the exploitation of the deep sea-bed to the monopoly of the Enterprise, thereby guaranteeing absolute fairness among all States. The so-called 'parallel system' of common/individual exploitation was introduced at the initiative of the US, and undermined the ideal of a common exploitation for the common benefit of mankind; Galindo Pohl, 'Latin America's Influence and Role in the Third Conference on the Law of the Sea', 7 *ODIL* (1979), 65, at 82 *et sequ.*; Grolin, 'The Deep Seabed: A North-South Perspective', in Laursen (ed.), *Towards a New International Marine Order* (Nijhoff, 1982), Chap. 9, at 131 *et sequ.*; Larschan & Brennan, *supra* n. 47, at 322; Li, *supra* n. 58, at 65 *et sequ.*, and 81 *et sequ.*; Mahmoudi, *supra* n. 58, 180 *et sequ.*; Mann-Borgese, 'The New International Economic Order and the Law of the Sea', 14 *San Diego LR* (1977), 584, at 590.

On the other hand, a series of restrictive measures are imposed upon States and private entities, and certain privileges granted to the Enterprise, ranging from financial and technological assistance, to immunities on the territory of the States parties (including taxation exemption), hence bolstering common exploitation of the deep seabed; on the range of preferential measures granted to the Enterprise, see Wolfrum, *supra* n. 45, at 331; on the restrictive measures imposed on the private sector and States, Mahmoudi, *supra* n. 58, at 215 *et sequ.* The *de lege* privileged status of the Enterprise has been justified as necessary to compensate its *de facto* inequalities with other 'individual' companies, in terms of technological and financial availability, and institutional structure (*inégalité compensatrice*); Li, *ibid.*, Chap. V; Mahmoudi, *ibid.*, 218 *et sequ.*

(63) Art. 140(2). The Convention leaves it to the International Seabed Authority to elaborate some rules and procedures to assure an equitable sharing of the financial and other economic benefits, 'taking into particular consideration the interests and needs of developing States'; Arts. 140 and 160(1)(g) and 160(2)(f)(i). The silence of the Convention reflects a serious disagreement between developing States, which regard their share to the benefit as a right flowing from their 'co-ownership' of the deep seabed, and developed States, which regard the sharing of benefit as an measure of aid to development; Li, *supra* n. 58, at 41 *et sequ.* Only the benefit made by the Enterprise is shared among States; on the other hand, the financial burden put on private contractors (joining fee, annual fee, compulsory transfer of technology on

(continued)

technology and scientific knowledge with regard to activities in the Area to the Enterprise and to developing States under more favourable terms than the market conditions⁽⁶⁴⁾.

- (4) The joint responsibility (*responsabilité solidaire*) of all States for the exploitation of the seabed area, *inter alia* for the financial costs⁽⁶⁵⁾ and economic losses⁽⁶⁶⁾ incurred by such exploitation.

Such a partnership-like conception of the common heritage of mankind has remained essentially a theoretical construction⁽⁶⁷⁾, an 'exercice de laboratoire juridique'⁽⁶⁸⁾; in

favourable terms) compensate, to a certain extent, the reduction of common benefit.

A certain contribution in kind or payment is also expected from coastal States, in relation to the exploitation of non-living resources of the continental shelf beyond their exclusive economic zone (Art. 82(1)). A suggestion was made to set up a fund that would be financed with a portion of the revenue realised by each coastal States from the exploitation of its off-shore sea-bed mineral resources within the exclusive economic zone, considering that a large proportion of ocean mineral resources being found within the EEZ rather than within the Area. The fund would have been used to help developing States to fight marine pollution, and finance the transfer of marine technology; see Logue, 'The Nepal Proposal for a Common Heritage Fund', 9 *California Western ILJ* (1979), 598. The proposition was largely dismissed as unrealistic; see Lynch, 'The Nepal Proposal for a Common Heritage Fund: Panacea or Pipedream?' 10 *California Western ILJ* (1980), 25.

(64) Art. 144 (2)(a) provides States have to make available to the Authority technical expertise employed in mining activities «under fair and reasonable terms and conditions», whilst Art. 5(3) of Annex III provides for the transfer of deep-sea mining technologies directly by deep-seabed mining operators «under fair and reasonable *commercial* terms and conditions» (emphasis added). Some authors have justified this apparent difference in standards on the ground that Art. 144 was a promotional provision, setting upon States 'general duties of cooperation and good conduct', whilst Art. 5(3) would impose strict and extensive obligations directly upon contractors, hence requiring a stronger wording; Hauser, *The Legal Regime for Deep Seabed Mining under the Law of the Sea Convention* (Kluwer & Metzner, 1983), 102; see also Li, *supra* n. 58, 153 *et sequ.* (on Art. 144), and Chap. VI (Art. 5 Annex III). In any case, the transfer of technology would take place under conditions more favourable than the market conditions, hence putting the Enterprise on a privileged position as compared to other 'individual public or private exploiting companies both with respect to access to technologies, and conditions of access; on the issue of technology transfer, see Charney, 'Technology and International Negotiations', 76 *AJIL* (1982), 78; Treves, 'Le transfert de technologie et la Conférence sur le droit de la mer', 104 *JDI* (1977), 43.

(65) The duty rests mostly on developed States to assist and finance the Enterprise; Art. 173(2) and Annex IV Art. 11.

(66) The prospect of a new source of minerals gave rise to fears among land-based producers countries of oversupply and related fall in price of minerals, hence indeed, in substantial reduction of their minerals related export receipts. To stabilise and compensate the losses of income suffered most seriously by developing States involved with land-based mining and exporters of minerals, 1982 UNCLOS imposes production ceilings (Art. 151) and provides for compensatory economic assistance (Art. 151(10)); list of land-based producers in Beer-Gabel, 'L'exploitation du fonds des mers dans l'intérêt de l'humanité: chimère ou réalité?', 81 *RGDIP* (1977), 167, at 179; see also Hegwood, 'Deep Seabed Mining: Alternative Schemes for Protecting Developing Countries from Adverse Impacts', 12 *Georgia JICL* (1982), 173; Schmidt, *Common Heritage or Common Burden?* (Clarendon, 1989), Chap. 6.

(67) In Boyle's words, 'a concept of potential rather than actual legal significance'; 'International Law and the Protection of the Global Atmosphere', in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 1, at 10. See in contrast the particularly enthusiastic assessment from Canada's Ambassador to UNCLOS III and Chairman of the Drafting Committee of the Conference, Beesley, 'The Negotiating Strategy of UNCLOS III, Developing and Developed Countries As Partners - A Pattern for Future Multilateral Conferences?', 46 *Law & Contemporary Problems* (1983), 183.

practice, it was seriously paralysed by the conflicting interests between developing States, having most to gain from a regime of controlled exploitation as embodied in the convention, Part XI⁽⁶⁹⁾, and technologically advanced States, most of them net importers of minerals⁽⁷⁰⁾, and thus having more to benefit from a *res communis* type of free exploitation regime⁽⁷¹⁾. Under a *res communis regime*, the prevailing first-come first-served rule and the technological superiority and financial means of developed States would assure them a *de facto* monopoly over the deep seabed resources⁽⁷²⁾.

Most deep seabed mining States enacted *interim* unilateral legal measures to govern access by their national private or public companies to deep seabed minerals for commercial purposes, pending a consensus among States on some international rules;

(68) Bachelet, *L'ingérence écologique* (Frison-Roche, 1995), 207.

(69) In terms of access to seabed mining technology, sharing of benefit from seabed mining and, for those involved in land-based mining, limitation of sea-mining competition and stabilisation of export receipts; Beer-Gabel, 'L'exploitation du fonds des mers dans l'intérêt de l'humanité: chimère ou réalité?', 81 *RGDIP* (1977), 167, 179; Friedman & Williams, 'The Group of 77 at the United Nations: an Emergent Force in the Law of the Sea', 16 *San Diego LR* (1979), 555.

(70) The US, Japan, USSR/Russia, EC; the US has assumed a prominent role in the opposition to the 1982 UNCLOS, Part XI. Whilst the previous administrations involved in UNCLOS III might have been inclined to compromise on the deep seabed mining as part of a 'global package deal' on ocean issues that would be more protective of US general interests, the Reagan administration remained uncompromising on the deep seabed mining regime, and made it a condition of acceptability of the whole convention. Hence, as soon as in office, in January 1981, President Reagan undertook to review most provisions that had been negotiated under his predecessor, and tried, in vain, to obtain more satisfactory accommodation of US interests; on 9 July 1982, Reagan officially announced that the US would not ratify 1982 UNCLOS «because the deep seabed mining part of the convention does not meet US objectives»; see text of the presidential statement to the Senate in 82 *Department of State Dispatch* (1982), No. 2065, 71; and US Ambassador Malone, Special Representative to the President for the third UN Conference on the Law of the Sea, before the House of Foreign Affairs Committee, 21 August 1982, *ibid.*, No. 2067, 48. For a detailed account of Reagan Administration's attitude towards the emerging deep seabed mining at the third Conference on the Law of the Sea, see Schmidt, *Common Heritage or Common Burden?* (Clarendon, 1989), Chap. 7.

The US boycotted all subsequent international negotiations on the deep seabed regime, and argued instead (a) that the right to explore and exploit deep-sea bed resources beyond national jurisdiction flows from the principle of freedom of the high seas, and (b) that no provision in international law prohibits the free exploitation of the deep seabed with reserve to reasonable regard for other States' interests (*res communis*); see Duff, 'UNCLOS and the New Deep Seabed Mining Regime: the Risk of Refuting the Treaty', 19 *Suffolk TLR* (1995), 1, at 7 *et sequ.*; Li, *supra* n. 58, at 30 *et sequ.*; Mahmoudi, *supra* n. 58, at 138 *et sequ.* More generally on US position in UNCLOS negotiations, see for instance Anand, 'UN Convention on the Law of the Sea and the United States', 24 *Indian JIL* (1984), 153; Charncy, 'United States Interests in a Convention on the Law of the Sea: the Case for Continued Efforts', 11 *Vanderbilt JTL* (1978), 39; Joyner, 'The United States and the New Law of the Sea', 24 *ODIL* (1996), 41; Larson, 'The United States Position on the Deep Seabed', 3 *Suffolk TLJ* (1978-79), 1; Larson, 'The Reagan Administration and the Law of the Sea', 11 *ODIL* (1982), 297; Larson, 'The Reagan Rejection of the U.N. Convention', 14 *ODIL* (1985), 337; Malone, 'The United States and the Law of the Sea', 24 *Virginia JIL* (1984), 785; Schmidt, *Common Heritage or Common Burden?* (Clarendon, 1989).

(71) On the difference between the *res communis* and common heritage regimes, see *supra* n. 54.

(72) Larschan & Brennan, *supra* n. 47, at 316; Feischer, 'The International Concern for the Environment: The concept of Common Heritage of Mankind', in Bothe (ed.), *Trends in Environmental Policy and Law* (IUCN, 1980), 321, at 334 *et sequ.*

none of the domestic legislation expresses a claim of sovereign rights over the deep seabed. Rather, the latter is -implicitly- treated as a *res communis*, hence open to free exploitation with reasonable regard for other States' interests⁽⁷³⁾. The ratification record of 1982 UNCLOS is illustrative of such cleavage. From the time of opening to signature to the time of deposit of the 60th instrument of ratification (Guyana, 1993) required for the entry into force of the Convention, only one was made by a developed State, Iceland. The deep seabed regime was the major cause for most seabed mining States not signing and/or ratifying the Convention⁽⁷⁴⁾.

(73) See US, Deep Seabed Hard Mineral Resources Act, 28 June 1980, reproduced in 19 *ILM* (1980), 1003; FRG, Act on the Interim Regulation of Deep Seabed Mining, 19 *ILM* (1980), 1330, amended in 1982; UK, Deep Sea Mining (Temporary Provision) Act 1981, 20 *ILM* (1981), 1218; France, Law on the Exploration and Exploitation of Mineral Resources of the Deep Seabed, 21 *ILM* (1982), 808; Soviet Union, Edict on Provisional Measures to Regulate Soviet Enterprises for the Exploration and Exploitation of Mineral Resources, 21 *ILM* (1982), 551; Japan, Law on Interim Measures for Deep Seabed Mining, 22 *ILM* (1983), 102; and Italy, Law on the Exploration and Exploitation of the Mineral Resources of the Deep Seabed, 24 *ILM* (1985), 983. On the national legislation and their compatibility under International Law, see Li, *supra* n. 58, Chap. III; Mahmoudi, *supra* n. 58, at 225 *et sequ.*; see also Briggs, 'Deep Seabed Mining and Unilateral Legislation', 8 *ODIL* (1980), 223; Caron, 'Municipal Legislation for Exploitation of Deep Seabed', 8 *ODIL* (1980), 259; Caron, 'Deep Seabed Mining: A comparative Study of U.S. and West German Municipal Legislation', 5 *Marine Policy* (1981), 4; Orrego Vicuna, 'Les législations nationales pour l'exploitation des fonds des mers et leur compatibilité avec le droit international', 24 *AFDI* (1978), 810; Oxman, 'La législation américaine sur les ressources minérales solides des fonds océaniques', 26 *AFDI* (1980), 700.

In 1984, the so-called 'like-minded States', Belgium, France, FRG, Italy, Japan, the Netherlands, the US and UK entered into a Provisional Understanding Regarding Deep Seabed Mining, to prevent overlapping mine site claims; 23 *ILM* (1984), 1354; Duff, 'UNCLOS and the New Deep Seabed Mining Regime: the Risk of Refuting the Treaty', 19 *Suffolk TLR* (1995), 1, at 9. France, FRG, the US and the UK had previously passed an agreement to facilitate the identification and resolution of conflicts that may arise from deep seabed mining activities; Agreement Concerning Interim Arrangements Relating to Polymetallic Nodules of the Seabed, 2 September 1982, 21 *ILM* (1982), 950, and Agreed Minute to the agreement, 23 *ILM* (1984), 1365.

(74) On the legal implication of the signature of the 1982 UNCLOS during the period prior to its entry into force, see King Gamble & Frankowska, 'The Significance of Signature of the 1982 Montego Bay Convention on the Law of the Sea', 14 *ODIL* (1984), 121.

The rejection of the concept of common heritage of mankind within the context of the new law of the sea, by the US and some other developed States has often been used as an argument to dismiss the legal status of the principle; See Birnie & Boyle, 121; Boyle, *supra* n. 11, at 10. Such argument has lost ground with the signature by most developed States of the 1994 UNCLOS Agreement Relating to the Implementation of Part XI, which reaffirms in its Preamble that «...the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction (hereinafter referred to as the Area), as well as the resources of the Area, are the common heritage of mankind». Nevertheless, doubts regarding the status of the common heritage of mankind in international law (and its practical utility for the purpose of environmental protection) pertain to the lack of precision of the actual content and implications of the norm, that would allow for its actualisation ('norm creating character'; see *North Sea Continental Shelf, Judgment, ICJ Rep. 1969*, 3, Para. 72), rather than to the existence of an *opinio juris sive necessitatis*; see Birnie, 'International Environmental Law: its Adequacy for Present and Future Needs', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 2, at 78; see also Birnie and Brownlie's comments in 'The Protection of the Global Heritage', 75 *ASIL Proc.* (1981), 32, at 33 *et sequ.*, and 53 *et sequ.*; Gorove, *ibid. supra*, at 394; Pardo & Christol, 'The Common Interest : Tension between the Whole and the Parts', in Macdonald & Johnston (eds.), *The Structure and Process of International Law : Essays in Legal Philosophy, Doctrine and Theory* (Martinus Nijhoff, (continued)

The 1994 UNCLOS Agreement Relating to the Implementation of Part XI⁽⁷⁵⁾ implies a substantial scaling-down from the original 'partnership-like' common heritage of mankind regime⁽⁷⁶⁾. It reflects the 'co-operation-like' conception of common heritage of mankind advocated by developed States as a platform for a freely accepted co-operation, grounded both in liberal and free market economy principles⁽⁷⁷⁾ and in the

1986), 643, at 656. Baslar reports also considerable variations of terms used to qualify the common heritage of mankind, referred as a doctrine, a concept, a regime, a notion or an idea, or even as a theory, a rule, a right, a principle or 'term of art'; *The Concept of the Common Heritage of Mankind in International Law* (Kluwer Law International, 1998), Ph.D manuscript, at 10 *et sequ.*

(75) The 1994 Agreement modifies the objectionable provisions of Part XI in a way that reflects interests of US and the other industrialised States; see US President's transmittal of the UNCLOS and the Agreement relating to the Implementation of Part XI to the US Senate with Commentary, October 7, 1994, in 34 *ILM* (1995), 1393. The Agreement, appropriately qualified of 'masterpiece of diplomatic ingenuity', was not presented as a formal amendment to the Convention, and could therefore be adopted with a mere vote at the General Assembly, instead of going through the whole amendment procedure; Koskenniemi & Lehto, *supra* n. 91, at 549. The 1994 Agreement is to be interpreted and applied together with 1982 UNCLOS Part XI, as one single document; in case of conflicting or inconsistent provision, the 1994 Agreement prevails; 1994 UNCLOS Agreement Relating to the Implementation of Part XI, Art. 2(1).

(76) Biermann, 'Common Concern of Humankind': the Emergence of a New Concept of International Environmental Law', 34 *AVR* (1996), 426, at 429 *et sequ.*; Koskenniemi & Lehto, *supra* n. 91, at 535 *et sequ.*

(77) Res.48/263, 17 August 1994, endorsing the 1994 UNCLOS Agreement Relating to the Implementation of Part XI, justifies the radical changes and revaluation of the original regime entailed by the 1994 Agreement as necessitated by «political and economic changes, including in particular a growing reliance on market principles...» (Para. 6). Informal negotiations on the deep-sea bed regime were initiated by UN Secretary-General Javier Perez De Cuellar in the early 1990s, as the free market economy ideology was sweeping through Eastern Europe. Nine issues were soon singled out for further discussion, *viz.* the distribution of the common exploitation costs between States parties, decision making procedures, the Review Conference, the transfer of technology, the productions ceilings, the compensation fund, the financial terms of contracts and environmental considerations; Larson, 'An Analysis of the Ratification of the UN Convention on the Law of the Sea', 26 *ODIL* (1995), 287, at 291. Res.48/263 was unanimously passed with 121 votes in favour; 7 countries abstained, mostly Latin American States (Colombia, Nicaragua, Panama, Peru and Venezuela), as well as Thailand and the Russian Federation. The latter justified its opposition on the ground that the provisions on the exploitation of the deep seabed were too favourable to the US interests; Oxman, 'The 1994 Agreement and the Convention', 88 *AJIL* (1994), 687, at 687 n.3.

Generally on the negotiations leading to the 1994 Agreement and analysis thereof see Anderson, 'Further Efforts to Ensure Universal Participation in the United Nations Convention on the Law of the Sea', 43 *ICLQ* (1994), 886; Anderson, 'Legal Implications of the Entry into Force of the UN Convention on the Law of the Sea', 44 *ICLQ* (1995), 313; Brown, 'Neither Necessary Nor Prudent at this Stage: the Regime of Seabed Mining and its Impact on the Universality of the United Nations Convention on the Law of the Sea', 17 *Marine Policy* (1993), 81; Brown, 'The 1994 Agreement on the Implementation of Part XI of the United Nations Convention on the Law of the Sea: Breakthrough to Universality?', 19 *Marine Policy* (1995), 5; Duff, 'UNCLOS and the New Deep Seabed Mining Regime: the Risk of Refuting the Treaty', 19 *Suffolk Transnat.LR* (1995), 1; Hayashi, 'The 1994 Agreement for the Universalization of the Law of the Sea Convention', 27 *ODIL* (1996), 31; Joyner, 'The United States and the New law of the Sea', 27 *ODIL* (1996), 41, at 47 *et sequ.*; Kolossovskiy, 'Prospect for Universality of the UN Convention on the Law of the Sea', 17 *Marine Policy* (1993), 4; Lévi, 'Les bons offices du Secrétaire Général des Nations Unies en faveur de l'universalité de la Convention sur le droit de la mer: la préparation de l'accord adopté par l'assemblée générale du 28 juillet 1994', 98 *RGDIP* (1994), 871; Li, *supra* n. 58, Chap. VII and VIII; Law of the Sea Forum: *The 1994 Agreement on the Implementation of the Seabed Provisions of the Convention on the Law of the Sea*, 88 *AJIL* (1994), 687. (continued)

necessity to assure the protection of existing interests and the economically profitability of the activity:

- (1) The deep seabed area is still qualified as the common heritage of mankind, under common ownership and common management of the Authority; but the decision-making procedures of the latter have been partly modified, to guarantee more influence and blocking power to major mining States⁽⁷⁸⁾.
- (2) The development of the resources of the area is to proceed for the common benefit of mankind 'in accordance with sound commercial principles'⁽⁷⁹⁾ and Gatt/WTO Rules⁽⁸⁰⁾, without subsidisation of activities in the seabed area⁽⁸¹⁾, production ceilings⁽⁸²⁾ or preferential access of terrestrial or seabed mining products to market⁽⁸³⁾; the Enterprise is treated on the same level with private mining corporation⁽⁸⁴⁾.
- (3) The transfer of technology shall to take place either 'on fair and reasonable commercial terms and *conditions on the open market*' or through joint-ventures arrangements⁽⁸⁵⁾, in any event in a way consistent with the effective protection of intellectual property rights⁽⁸⁶⁾. Express provision is made for the preservation of the 'acquired rights' of pioneer investors⁽⁸⁷⁾.
- (4) States are, to a certain degree held responsible for the costs and losses incurred by the common exploitation of the deep seabed area; the common management, however, shall be operated in a cost effective way⁽⁸⁸⁾ and the financial burden be evenly shared⁽⁸⁹⁾.

US official position towards the Agreement reviewed at 89 *AJIL* (1995) 112.

(78) The Assembly policy-making power is qualified by the Council's power or recommendations on issues on which it is also competent (1994 UNCLOS Agreement Relating to the Implementation of Part XI, Annex, Sect. 3, Paras. 1 & 4). Besides, the voting-chamber procedure has been introduced in the Council, hereby securing States the possibility to block unwanted decisions (Annex, Sect. 3, Paras. 9, 10 & 15); the US is, *de facto*, guaranteed a seat in the Council, being the largest economy in terms of gross national product when the Agreement was signed (Annex, Sect. 3, Paras. 15(a)); see Oxman, 'The 1994 Agreement and the Convention', 88 *AJIL* (1994), 687, at 689 *et sequ.*

(79) Annex, Sect. 6, Para. 1(a).

(80) Annex, Sect. 6, Para. 1(d).

(81) Annex, Sect. 6, Para. 1(b).

(82) Annex, Sect. 6, Para. 7.

(83) Annex, Sect. 6, Para. 1(c).

(84) Annex, Sect. 2, Para. 4.

(85) Annex, Sect. 5, Para. 2 (emphasis added).

(86) Annex, Sect. 5, Para. 1(b)

(87) Annex to the Agreement, Sect. 1, Para. 6(a)(i) UNCLOS II res II & III

(88) To preserve incentives, and avoid that the profit made from the exploitation of the deep seabed, (continued)

Whilst a universal or unanimous support for global environmental agreements is clearly neither feasible nor necessary, it is also obvious that the efficiency of the global regime depends on the support of the major economic powers as well as the support of otherwise 'specially affected States' (host States, major users, major exporters...)⁽⁹⁰⁾. And indeed, one argument quite rightly put forward by the US government to undermine the importance of 1982 UNCLOS, Part XI, is the lack of support from industrialised States which, as a whole, contribute 60% of the UN budget, by contrast with the group of ratifying and acceding States representing a joint share of less than 5%⁽⁹¹⁾.

As Handl concludes, «[f]or whatever common approach may be necessary to redress the problems of North-South interdependence, remedial action will not succeed unless it is supported and adhered to by countries viewing it is in their national interest to do so»⁽⁹²⁾. The same conclusion was reached in relation to economic development in general by the then UN Secretary-General, Boutros-Ghali, in his *Agenda for Development*, «[e]ffective international cooperation for development cannot succeed unless the major economies make it their own objective»⁽⁹³⁾.

The negotiations on deep seabed mining, taken in the general context of the new international economic order debate, offer no particular indications of the type and degree of 'co-operation' States are ready to engage in, more particularly in the field of environmental protection. However, it clearly indicates two things:

Firstly, States are not ripe yet for an effective (quasi) universal partnership modelled upon the domestic institution, considering (a) the persistent focus on national interest, as opposed to international/common interest, and (b) the serious disparity between the

already largely undermined by the considerable investment required by such activity, is completely absorbed by mechanisms of common management; Beer-Gabel, 'L'exploitation du fonds des mers dans l'intérêt de l'humanité: chimère ou réalité?', 81 *RGDIP* (1977), 167, at 175; Schmidt, *Common Heritage or Common Burden?* (Clarendon, 1989), Chap. 6.

(89) Compensatory economic assistance to less developed countries is funded by (a) the income generated by the Authority mining activities and (b) voluntary contribution after the administrative expenses of the authority have been covered. A Finance Committee is established by the 1994 Agreement, *inter alia* against the risk of excessive attribution of resources to compensatory assistance; US and other major industrial powers are guaranteed a seat on this committee. The financial burden resting on private contractors and States whose nationals are involved in seabed mining is thus considerably reduced, and the deep seabed mining made a more economically profitable activity.

(90) Joyner & Martel, 'Looking Back to See Ahead: UNCLOS III and Lessons for Global Commons Law', 27 *ODIL* (1996), 73, at 80 *et sequ.*; see also Shibata, 'International Law-Making Process in the United Nations: A Comparative Analysis of UNCED and UNCLOS III', 24 *California Western ILJ* (1993), 17.

(91) Koskenniemi & Lehto, 'The Privilege of Universality', 65 *Nordic JIL* (1996), 533, at 535.

(92) 'Protection and Development in Third World Countries: Common Destiny - Common Responsibility', 20 *New York University JIL & Politics* (1988), 603, at 607.

(93) Para. 58; see also 1990 Strategy for the Fourth Development Decade, Para. 15.

'partner States' and consequent greater concession imposed upon part of them to enable the other partners to fulfil their share of responsibility as partners⁽⁹⁴⁾.

Haas and Sundgren have appropriately stressed that «the "logic of collective action" suggests that individual countries will not cooperate on issues that seriously challenge their sovereignty and if they fear that their own costly actions will not be reciprocated»⁽⁹⁵⁾. It is very illustrative that the concept of common heritage, although finally not fully assimilated to a partnership-like institution, has been cautiously avoided in any subsequent global negotiation on common environmental issues, and was substituted by the classic *res communis* concept or by more innovative expressions such as common concern or common interest of mankind⁽⁹⁶⁾.

The fear of establishing an undesirable 'precedent with respect to systems of governance' underpinned the US opposition to a partnership-like conception of common heritage of mankind in the context of the law of the sea⁽⁹⁷⁾. On the other hand, as Caldwell optimistically suggests, it is not utopian to believe that «the environmental concerns of nations may induce their cooperation more rapidly than have the more conventional issues of international relations such as armaments, monetary exchange, trade, investment, and human rights»⁽⁹⁸⁾.

Secondly, the deep seabed mining negotiations have revealed a number of parameters essentially related to the transfer of technology and to financial assistance within which States are ready to engage into co-operation, and which have clearly influenced the shaping of subsequent regime on global environmental issues⁽⁹⁹⁾.

(94) Joyner & Martel, 'Looking Back to See Ahead: UNCLOS III and Lessons for Global Commons Law', 27 *ODIL* (1996), 73, at 85; also Hossain, 'Natural Resources: Heritage of Nation and Mankind', in Grahl-Madsen & Toman (eds.), *The Spirit of Uppsala*, Proceedings of the Joint UNITAR-Uppsala University Seminar on International Law and Organization for a New World Order (JUS 81), Uppsala, 9-18 June 1981, (Walter de Gruyter, 1984), 302, at 306.

(95) 'Evolving International Environmental Law?', in Choucri (ed.) *Global Accord* (MIT: 1993), 401, at 403. Richardson further underlines that «[w]here a country is asked to do more or give up more than its self-interest would warrant, it must be afforded positive incentives to sacrifice for the larger good»; 'Climate Change: Problems of Law-Making', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 6, at 176. In the same sense, Pardo & Christol, *supra* n. 47, at 644 *et sequ.*

(96)

iv. Common Concern, Common Interest of Mankind: Global Partnership or Global Bargain? *Infra*

(97) Darman, 'The Law of the Sea: Rethinking the U.S. Interests', 56 *Foreign Affairs* (1978), 373.

(98) *International Environmental Policy*, at 126-127.

(99) See *infra* 3. The Parameters for Global Co-operation ()

iv. Common Concern, Common Interest of Mankind: Global Partnership or Global Bargain?

Despite the lack of agreement among States on the actual implications of common heritage of mankind, suggestions have been made to apply the concept to other global environmental issues. Hence, the designation of global climate as the common heritage of mankind was already contemplated by Pardo as a possible development on the basis of the law of the sea experience⁽¹⁰⁰⁾. Such suggestion was not followed by UNGA, however, which finally designated climate change as a 'common concern of mankind'⁽¹⁰¹⁾, a qualification endorsed by States in the 1992 Climate Change Convention⁽¹⁰²⁾.

Biodiversity⁽¹⁰³⁾, and tropical forests⁽¹⁰⁴⁾ have also been candidates for the qualification of common *heritage* of mankind. Suggestions in this sense were rejected

(100) See for instance, 'The Emerging Law of the Sea', in Walsh (ed.), *The Law of the Sea: Issues in Ocean Resources Management* (Praeger, 1977), 33. The 'common concern' approach had already clearly inspired the 1982 World Charter for Nature, drafted as a code of conduct to guide the activities of mankind towards the environment. In its discourse introducing the idea of a World Charter for Nature, delivered at that 12th General Assembly of the IUCN, held in Kinshasa, the former Zairian (now Republic of Congo) President General Mobutu Sese Seko stated: «The seas, the oceans, the upper atmosphere belong to the human community (...) One cannot freely use [such] international resources (...); quoted after Burhenne & Irwin, *The World Charter for Nature, Legislative History*, 2nd revised edn (Erich Schmidt, 1986), at 14. More generally on the atmosphere as common heritage/concern of mankind, see Birnie & Boyle, 112; Boyle, 'International Law and the Protection of the Global Atmosphere', in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, 1991), Chap. 1; Westing, 'The Atmosphere as a Common Heritage of Humankind: its Role in Environmental Security', *Scientific World* (1994), 5; see further Ramakrishna, 'North-South Issues, Common Heritage of Mankind and Global Climate Change', 19 *Millennium* (1990), 439; Redgwell, 'Intergenerational Equity and Global Warming', in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman-Nijhoff, 1991), Chap. 3.

(101) See series of resolutions on the Protection of Global Climate for Present and Future Generations of Mankind, UNGA A/Res./43/53, 6 December 1988, Para. 1; A/Res./44/207, 22 December 1989, preambular Para. 1; A/Res./45/212, 21 December 1990, preambular Para. 1; see also 1989 Langkawi Declaration of the Commonwealth Heads of Governments; 1989 Noordwijk Declaration on Atmospheric Pollution and Climate Change; UNEP Governing Council Decision 15/36 on Global Climate Change, 25 May 1989, preambular Para. 6; Decision SS.II/3, 3 August 1990, preambular Para. 1; all the above documents on climate are reproduced in Churchill & Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, 1991), Annexe.

(102) Preambular Para. 1. Likewise, albeit not explicitly qualified as such by either the 1985 Vienna Convention on the Ozone Layer or by the original 1987 Montreal Protocol on the Ozone Layer, ozone layer depletion is clearly considered as a matter of common concern of mankind, part of the more general problem of climate change and global warming recognised to be of the common concern of mankind. Besides, it will be demonstrated that the applicable regime under the 1987 Montreal Protocol as modified in 1990, shares many of the characteristics of the Climate Change and Biodiversity Conventions.

(103) See for instance IUCN Draft Convention for the Conservation of Biodiversity, 1989, commented in de Klemm & Shine, *Biological Diversity Conservation and the Law*, Environmental Policy & Law Paper No. 29 (IUCN Environmental Law Center, 1993), 17 *et sequ.*; see also Bell, 'The 1992 Convention on Biological Diversity: the Continuing Significance of US Objections at the Earth Summit', 26 *George Washington JIL & Economics* (1993), 479, at 501 *et sequ.*

outright by developing States, as unsuited to natural resources located in great majority on national territory⁽¹⁰⁵⁾. Developed States, on the other hand, were more particularly resistant to the financial implications arising from the principle of conservation cost-sharing attached to the qualification common heritage of mankind, and to the transfer of biotechnology. Like climate change, the conservation of biodiversity was finally declared the common *concern* of humankind⁽¹⁰⁶⁾. Natural resources were already qualified as a 'capital of vital importance to mankind' in the 1968 African Convention on Nature⁽¹⁰⁷⁾, and the marine environment and living marine resources that supported it were similarly

(104) See for instance FAO draft proposal for a Forestry Convention; on which see Schally, 'Forests: Towards an International Legal Regime?' 4 *YbIEL* (1993), 30; Dan Tarlock, 'Exclusive Sovereignty versus Sustainable Development of a Shared Resource: the Dilemma of Latin American Rainforest Management', 32 *Texas ILJ* (1997), 37, at 41. See also generally Brunnée, 'A Conceptual Framework for an International Forests Conventions: Customary Law and Emerging Principles', in Canadian Council on International Law (ed.), *Global Forests and International Environmental Law* (Kluwer Law International, 1996), Chap. 2; Myers, 'The Anatomy of Environmental Action: the Case of Tropical Deforestation', in Hurrell & Kingsbury, *The International Politics of the Environment* (Clarendon, 1992), Chap. 16; Sands, *Principles* (Vol. I), 406 *et sequ.*; Saunders, 'Valuation and International Regulations of Forest Ecosystems: Prospects for a Global Forest Agreement', 66 *Washington LR* (1991), 871; Szekely, 'The Legal Protection of the World's Forests after Rio '92', in Campiglio, *et al.* (eds.), *The Environment after Rio, International Law and Economics*, (Graham & Trotman/Martinus Nijhoff, 1994), Chap. 6; Yamin & Flint, '1992: the Year in Review - Forests', 3 *YbIEL* (1992), 326. See also Yamin & Cameron, *Convention for the Conservation and Wise Use of Forests Draft Text*, (Center for International Environmental Law, 1991).

(105) Burhenne-Guilmin & Casey-Lefkowitz, 'The Convention on Biological Diversity: a Hard Won Global Achievement', 3 *YbIEL* (1992), 43, at 47. Also *supra*, Chap. 2/iii. Sovereignty over Environmental Resources and Environmental Policies versus of Globalisation of Environmental Standards and Policies.

(106) 1992 Convention of Biodiversity, preambular Para. 3. The non-binding International Undertaking on Plant Genetic Resources, adopted at the Twenty-Second Session of the FAO Conference, 1983, and hitherto adhered to by over a hundred States, assimilates plant genetic resources to a heritage of mankind; on which see Yusuf, 'International Law and Sustainable Development: The Convention on Biological Diversity', 2 *African YbIL* (1994), 109, at 127 *et sequ.* The expression 'common interest' had previously been used in the 1946 Whaling Convention, preambular Para. 4, to qualify the preservation of whale stocks at an optimum level, without any reference being made however, to the 'holder' of the common interest. The 1979 Bonn Convention on the Conservation of Migratory Species states that the earth natural system is to be conserved for the 'good mankind'; Preamble. The expression of 'common good of mankind' was also used in 1972 Stockholm Declaration on the Human Environment, albeit in the more general context of the protection of the environment; Princ. 18. 1989 Resolution 44/229, on International Cooperation in the Field of the Environment, provides that «the conservation and utilization of biological diversity [is] a priority, and important element of the ecological balance and source of benefit to mankind»; Para. 22.

(107) Preambular Para. 1; see also Cocca, 'Environment as a Common Heritage of Mankind', *Proceedings of the 32nd Colloquium on the Law of Outer Space* (1989), 71; Doyle, 'Legal and Policy Implications of Treating Natural Resources as the Common Heritage of Mankind', *Proceedings of the 32nd Colloquium on the Law of Outer Space* (1989), 31; Hossain, 'Natural Resources: Heritage of Nation and Mankind', *supra* n. 94, 302.

recognised of 'vital importance to humanity' in the 1972 London Convention on Dumping of Wastes⁽¹⁰⁸⁾.

The negotiation of an internationally binding agreement on forestry management that would in a way 'legitimise' the 'common concern' of all States in the conservation of forestry resources, was postponed in the process leading to the 1992 Rio Conference on Environment and Development, and the conservation of forests was finally declared to be of concern to 'the Governments of the countries to which they belong'⁽¹⁰⁹⁾. The suggestion of an international Convention on the Protection of the Forests was reiterated by the European Union at 1997 UNCED + V, convened to review the progresses made in the implementation of the instruments adopted at the 1992 Conference on Environment and Development, but failed over the opposition of a majority of States, which perceived the elaboration of a new document as a vain effort if not accompanied by appropriate financial and institutional means. The possibility of a compromise solution was postponed, that would place the protection of forestry resources under the auspices of the 1992 Biodiversity Convention⁽¹¹⁰⁾. Some other global environmental issues, such as preservation of the Antarctic environment⁽¹¹¹⁾, desertification and drought⁽¹¹²⁾, or more generally current threats to the environment⁽¹¹³⁾, have been declared the 'common concern of mankind'⁽¹¹⁴⁾.

(108) Preamble; see Boyle, 'The Convention on Biological Diversity', in Campiglio et al (eds.), *The Environment After Rio: International Law and Economics* (Graham & Trotman/Martinus Nijhoff, 1994), Chap. 8; Burhenne-Guilmin & Casey-Lefkowitz, *supra* n. 105, at 47 *et sequ.*, and 53 *et sequ.*

(109) 1992 Forestry Principles, preambular Para. (f).

(110) *Le Monde*, 28 June 1997, 2.

(111) 1991 Antarctic Treaty Environmental Protocol, preambular Para. 7.

(112) 1994 Desertification Convention, preambular Para. 2, refers to the 'urgent concern of the international community'.

(113) The 1990 Strategy for the Fourth Development Decade, states that «the current threat to the environment is a common concern of all»; Para. 96 (emphasis added). It was also suggested by IUCN in its 1995 Draft Covenant on Environment and Development; Art. 3 provides that «the global environment is the common concern of humanity».

(114) Some authors draw a clear distinction between the common interest and common concern of mankind formula, construing the former as generic terms encompassing three related but distinct aspects:

1) the *coinciding interests*, or the purely factual interest in not being impaired by the equal conduct of other States;

2) the *shared interests*, or common interest over a shared issue, hence more stable and providing guidelines for the desired conduct of other States, but containing as such not legally binding obligations;

3) the *common concern of mankind*, expressing a common interest 'so compelling that it alone formulates the rule and coincides with the rule's content'; Brunnée, *supra* n. 104, at 807.

In this sense, the common interest of mankind formula would go beyond the common concern of mankind, the latter being only a facet of the former. Such a distinction however, is largely rhetorical, and is not reflected in the legal regime attached to each formula; besides, the 1992 Biodiversity Convention contains both expressions of common concern (preambular Para. 3) and common interest (mutual interest, *(continued)*)

The common concern and common interest of mankind formulas hence emerged largely as an alternative formula to common heritage of mankind⁽¹¹⁵⁾. Left undefined in the various international legal documents referring to it, common concern is broadly understood in the doctrine⁽¹¹⁶⁾ as being of 'paramount importance to the international community', thus implying a general and common obligation of all States⁽¹¹⁷⁾. By contrast to common heritage of mankind and common property, applied exclusively to resources beyond domestic jurisdiction, common concern of mankind encompasses resources located within, or related to, domestic jurisdiction⁽¹¹⁸⁾. Hence for instance, the loss of biodiversity is declared the common concern of mankind although the vast majority of biodiversity is situated within the state territorial jurisdiction. Likewise, most of the measures to be taken in the effort to address climate change and global warming concern activities performed within the territories of States⁽¹¹⁹⁾. Issues are thus declared the common concern of mankind neither because the source originates in a common action of all States, nor because a potentially harmful action affects a common resource beyond national jurisdiction, but because the effect(s) would affect all States and is therefore the legitimate object of concern of all States:

«'Common concern' is the term first used by the UN General Assembly to justify treating the global climate as a unity, regardless of national sovereignty over subjacent airspace and land territory. Its most important implication is that it places the protection of these areas or phenomena on the international agenda and makes them the legitimate object of international attention, overriding the reserved domain of domestic jurisdiction or the possible contention that they relates to matters within the exclusive sovereignty of individual states.»⁽¹²⁰⁾

Art. 5). Far more convincing is Boyle's four-fold classification Shared Resources, Common Interest/Concern of Mankind, Common Property, and Common Heritage of Mankind; see Birnie & Boyle, *International Law and the Environment* (1992), 112; Boyle, *supra* n. 100.

(115) Boyle, *supra* n. 108, at 117. Kiss however, seems to consider the common heritage of mankind as «the complete territorial expression or at least the materialization of the common interest of mankind»; 'Conserving the Common Heritage of Mankind', 59 *Revista Jurídica de la Univerisdad de Puerto Rico* (1990), 773, at 774.

(116) See Biermann, 'Common Concern of Humankind': the Emergence of a New Concept of International Environmental Law', 34 *AVR* (1996), 426; Brunnée, *supra* n. 104; Kiss, 'The International Protection of the Environment', in Macdonald & Johnston (eds.), *The Structure and Process of International Law: Essays in Legal Philosophy Doctrine and Theory* (Martinus Nijhoff, 1983), 1069, at 1084; Trindade & Attard, 'The Implications of the 'Common Concern of Mankind' Concept on Global Environmental Issues', in Iwama (ed.), *Policies and Law on Global Warming: International and Comparative* (Environmental Research Center, 1991).

(117) Burhenne-Guilmin & Casey-Lefkowitz, *supra* n. 105, at 48.

(118) Boyle, *supra* n. 100.

(119) On that distinction see Birnie & Boyle, at 123; Wolfrum, 'Purposes and Principles of International Environmental Law', 33 *German YbIL* (1990), 308, at 323.

(120) Birnie & Boyle, at 85; see also Boyle, *supra* n. 100, at 11.

The extent to which an analogy can be drawn between the expression of *common concern/interest of mankind*, and the *concern of all States* criterion of the *erga omnes* obligation⁽¹²¹⁾, the *fundamental interest to the international community as a whole* criterion of ILC's definition of international crimes⁽¹²²⁾, or indeed, the *one and all common interests of all Contracting Parties* criterion of peremptory norms of international law⁽¹²³⁾, remains an open question.

Some authors have no hesitation in drawing such an analogy, and consider that the responsibility towards the issues declared to be the common concern of mankind, including global warming and ozone layer depletion (and probably loss of biodiversity), are *erga omnes* in essence and hence owed to the community of States, and not only to the high contracting parties⁽¹²⁴⁾. Certain scholars would even suggest that such obligations are part of the *ius cogens* and suffer no derogation and prevail over any other non mandatory obligation⁽¹²⁵⁾. States' repeated affirmation of sovereignty throughout the negotiations of a regime on biodiversity (and forestry resources), climate change or ozone layer, however, casts some serious doubts on the *erga omnes* character of related obligations. The *common concern of mankind* formula might legitimise some international regulations and the imposition of international obligations on issues or activities which are, *prima facie*, the object of domestic jurisdiction; it does not however,

(121) ICJ defined *erga omnes* obligations as «...obligations of States towards the international community as a whole...» which are «[b]y their very nature, (...) the concern of all States...»; *Barcelona Traction, Light and Power Company, Limited, Judgment, ICJ Rep. 1970*, 3, at Para. 33; and *supra* Chap. 2/4/II/c. Limits Arising from General Environmental Considerations.

(122) The ILC Draft Articles on State Responsibility define an international crime as «[a]n internationally wrongful act which results from the breach of an international obligation so essential for the protection of fundamental interests of the international community that its breach is recognized as a crime by that community as a whole...»; see 1980 Draft Articles on State Responsibility, (Art. 19(2)). The Draft Articles explicitly mention 'serious breach of an international obligation of essential importance for the safeguarding and preservation of the human environment, such as those prohibiting massive pollution of atmosphere or of the seas»; *ibid.*, Art. 19(3)(d). Article 19 has been preserved unaltered in the 1996 version of Draft Articles on State Responsibility; see further *supra* Chap. 2/4/II/c. Limits Arising from General Environmental Considerations.

(123) In its Advisory opinion concerning *Reservations to the Convention on Genocide*, the ICJ held that «in such a convention the contracting States do not have any interest of their own; they merely have, one and all, a common interest...»; *ICJ Rep. 1951*, 15, at 23; see *supra* Chap. 2/4/II/c. Limits Arising from General Environmental Considerations.

(124) See Epiney, 'Das "Verbot erheblicher grenzüberschreitender Umweltbeeinträchtigungen": Relikt oder konkretisierungsfähige Grundnorm?', 33 *AVR* (1995), 309, at 333-334; Kirgis, 'Standing to Challenge Human Endeavours that Could Change the Climate', 84 *AJIL* (1990), 525, at 527. See also IUCN 1995 Draft Covenant on Environment and Development, commentary on Art. 3, at 33.

(125) See 1969 Vienna Convention on the Law of Treaties, Art. 53; see Biermann, *supra* n. 116, at 452 *et sequ.*; Brunnée, *supra* n. 104, at 802 *et sequ.* See also Report UNEP Group of Legal Experts Meeting of Malta, 13-15 December 1990, on the Implications of Common Concern of Mankind', concept on global environmental issues; relevant extracts reproduced in Cançado Trindade (ed.), *Human Rights, Sustainable Development and Environment* (Instituto Interamericano de Desarrollo, 1995), Annex V.

in the current state of international law⁽¹²⁶⁾, confer a genuine legal interest to any State in the protection of the domestic environment of other States.

3. The Parameters for Global Co-operation⁽¹²⁷⁾

The main parameters of the debate on the common concern of mankind are the same as those related to the common heritage of mankind⁽¹²⁸⁾, and relate to financial assistance, compensation and transfer of technology. Financial assistance and transfer of technology were put on the agenda of the United Nations in the early 1960s⁽¹²⁹⁾ as part of the 'development debate'. Whilst, as a matter of principle, these parameters are generally recognized to be necessary to assure an accelerated development of less developed States, their foundation, their nature, and their terms revealed to be particularly controversial. Developing States would consider any sort of assistance from the part of developed States as a matter of legitimate expectation, flowing from the principle of compensatory solidarity and substantive equality⁽¹³⁰⁾ enshrined in peoples' right to development⁽¹³¹⁾.

(126) Even though the ILC's progress on State Responsibility and State Liability for Acts not Prohibited by International Law is to be born in mind, the current international legal trend is still unsympathetic to «a right resident in any member of a community to take legal action in vindicating of a public interest»; *South West Africa, Second Phase, Judgment, ICJ Rep. 1966, 6, at Para. 88; further supra Chap. 2/4/II/c. Limits Arising from General Environmental Considerations.*

(127) The term 'assistance' might be more appropriate with regard to the developed-to-developing States relationship, in the sense that, in the current state of their development, the latter remain largely dependant upon the former on funding and technology, and are not in a position to co-operate on equal footing, with developing States. To simplify, and also because the term 'co-operation' is increasingly preferred to that of assistance in international documents, co-operation will be used here, bearing in mind however that in certain cases, indeed, in the majority, co-operation will impose a heavier burden on developed States.

(128) Except from the issue of controlled production policy, not considered in the context of common concern of mankind.

(129) In the late 1960, UNGA, A/Res./1522 (XV) was passed, urging the acceleration of the flow of capital and technical assistance to developing States, to reach at least 1% of the combined national income of advanced economies; Para. 1. An Expanded Programme of Technical Assistance and a Special Funds were set up the following year for the biennium 1961-1962; UNGA, A/Res./1713 (XVI), 19 December 1961, on the Role of Patents in the Transfer of Technology to Under-developed Countries.

(130) Bouveresse, *Droit et politiques du développement et de la coopération*, Presses Universitaires de France, 1990), Para. 280. The principle of 'solidarité compensatrice', inspired from Aristotle's idea of *iustitia distributiva* and equity, was developed into a basic principle of developmental law in the early 1970s, to counter the classic rules and principles of 'European-international' law, strictly focused on the formal equality of States, hence perpetuating material inequities and preserving the subordinated status of former colonies.

(131) It falls well beyond the purpose of this thesis to enter to long-drawn controversy related to the so-called right to development. Apart from fundamental question of the very existence and legal foundations of this right, it remains unclear as to whether it is an individual (human) or/and a collective (peoples') right, the 1986 Declaration on the Right to Development being worded both in terms of collective and individual rights, and what the precise content of the right is, although it is often associated to the claim for a New International Economic Order. The literature on the right to development is as diverse as
(continued)

The principle of 'solidarité compensatrice' stresses the need to enact new rules, *inter alia* with respect to financial and technical assistance, that would take into consideration the concrete conditions and the differences between States (*états situés*). It would provide, when necessary, for temporary positive discrimination to correct the *de facto* inequality among developed and developing States, and enable the latter to achieve an 'indépendance agissante' and 'égalité effective'⁽¹³²⁾. The status of the principle of compensatory solidarity as a legally binding principle of developmental (and perhaps environmental) law has remained very controversial however⁽¹³³⁾. Some authors suggest that there might sufficient evidence, both in state practice and in treaty law, of the existence and necessity of a customary principle of international environmental solidarity⁽¹³⁴⁾. Other scholars are critical of an international legal principle of solidarity, and more particularly of the related *duty* to provide financial and technological

abundant; see *inter alia* Abi-Saab, 'The Legal Formulation of A Right to Development', in Dupuy (ed.), *The Right to Development at the International Level*, Workshop, 1979 (Sijthoff & Noordhoff, 1980) 159; Alston, 'The Short Comings of a 'Garfield the Cat' Approach to the Right to Development', 15 *California Western ILJ* (1985), 510; Alston, 'Making Space for New Human Rights: The Case of the Right to Development', 1 *Human Rights Yb* (1988), 3; Barsh, 'The Right to Development as a Human Right: Results of the Global Consultation', 13 *Human Rights Quarterly* (1991), 322; Brownlie, *The Human Right to Development*, Study prepared for the Commonwealth Secretariat (Commonwealth Secretariat, 1989); Donnelly, 'In Search of the Unicorn: The Jurisprudence and Politics of the Right to Development', 15 *California Western ILJ* (1985), 473; Espiell, 'The Right to Development as a Human Right', 16 *Texas ILJ* (1981), 189; M'Baye, 'Le Droit au développement comme un droit de l'homme', 5 *Revue des Droits de l'Homme* (1972), 503; Pellet, 'The Functions of the Right to Development: A Right to Self-Realization', in International Third World Legal Studies Association, *Human Rights and Development*, (Third World Legal Studies, 1984), 129; Rich, 'The Right to Development as an Emerging Human Right', 23 *Virginia JIL* (1983), 287; Rich, 'The Right to Development: A Right of Peoples?', in Crawford (ed.), *The Rights of Peoples* (Clarendon, 1988), Chap. 3; Rojas-Albonico, *Le droit au développement comme un droit de l'homme* (Peter Lang, 1984); Tomuschat, *supra* n. 130; de Vey Mestdagh, 'The Right to Development: From Evolving Principle to 'Legal' Right: In Search of its Substance', in International Commission of Jurists, *Development, Human Rights and the Rule of Law*, Report of a Conference held in The Hague (Pergamon, 1981), 143. For a criticism on the 'internal' dimension of the right to development as a *human* right and more generally the so-called solidarity human rights (or human rights of the third generation), see Alston, 'A Third Generation of Solidarity Rights: Progressive Development or Obfuscation of International Human Rights Law?', 29 *Netherlands LR* (1982), 307; Alston, 'Conjuring New Human Rights: A Proposal For Quality Control', 78 *AJIL* (1984), 607.

(132) See Beck, *Die Differenzierung von Rechtspflichten in den Beziehungen zwischen Industrie- und Entwicklungsländern. Eine völkerrechtliche Untersuchung für die Bereiche des internationalen Wirtschafts-, Arbeits- und Umweltrechts* (Peter Lang, 1994), Chap V; Cassese, *International Law in a Divided World* (Clarendon, 1986), Chap. 13; Flory, 'Inégalité économique et évolution du droit international', in Société Française pour le Droit International, *Pays en voie de développement et transformation du droit international* Colloque d'Aix-en-Provence (Pédone, 1974) 11 at 19 *et sequ.*; Flory, *Droit international du développement* (Presses Universitaires de France, 1977), at 37 *et sequ.*; Quoc Dinh: *Droit International Public*, § 626; Virally, 'La Charte des droits et devoirs économiques des Etats: Notes de lecture', 20 *AFDI* (1974), 57, at 75 *et sequ.*

(133) Fatouros, 'Developing States', in Bernhardt (ed.), *Encyclopedia of Public International Law*, Instal. 9 (North-Holland, 1986), 71.

(134) Biermann, *supra* n. 116, at 465.

assistance, even though they recognise the actual necessity of such assistance, at least for issues qualified to be the common concern of mankind⁽¹³⁵⁾.

Developed States on the other hand, have always considered technical and financial assistance as a matter of goodwill and co-operation, freely entered into with developing States⁽¹³⁶⁾, and have consistently refused to endorse any binding obligation that would commit them to increase development assistance or intensify technology transfer⁽¹³⁷⁾; they have more generally objected to the consideration of development as any more than a goal⁽¹³⁸⁾. The debate on technology transfer and financial assistance within the context of the negotiation on the deep seabed mining illustrates well these positions.

The discussion on these issues seems to have taken a different turn in the context of environmental negotiations, most notably in the negotiations on climate change,

(135) Beck, *supra* n. 132., Chap. IV, at 188 *et sequ.*; Tomuschat, 'Das Recht auf Entwicklung', 25 *German YbIL* (1982), 85, at 90 *et sequ.*; Epiney harbours some serious reservation about the differentiation of environmental standards for developed and developing States; Epiney, 'Das "Verbot erheblicher grenzüberschreitender Umweltbeeinträchtigungen": Relikt oder konkretisierungsfähige Grundnorm?', 33 *AVR* (1995), 309, at 344 *et sequ.*

(136) See *infra* i. Financial Assistance: Additionality and Compensation and ii. Transfer of Technology.

(137) See *infra* Chap. 2/2/ ii. Sovereignty over Economic Assets and Policy in a New International Economic Order.

(138) The US has consistently expressed its opposition and other major donor States (Japan, FRG, UK) abstained from voting on the landmark Resolution endorsing the right to development, most notably UNGA A/Res./34/46, 23 November 1979, on Alternative Approaches and Ways and Measures within the United Nations System for Improving the Effective Enjoyment of Human Rights and Fundamental Freedoms, and UNGA A/41/128, 4 December 1986, Declaration on the Right to Development. The right to development was reaffirmed, albeit its content not clarified and the right holders not specify in the 1992 Rio Declaration on Environment and Development, Princ. 3, the 1992 Forestry Principles, and the 1993 Vienna Declaration and Programme of Action, Paras. 10, 11 and 72. IUCN 1995 Draft Covenant on Environment and Development, Art. 8, echoes 1992 Rio Declaration Princ. 3. The US reiterated its opposition at the 1992 Rio Conference on Environment and Development with the following statement:

«The United States does not, by joining the consensus on the Rio Declaration, change its long-standing opposition to the so-called right to development'. Development is not a right. On the contrary, development is a goal that we all hold, which depends for its realization in large part on the promotion and protection of human rights (...) The United States understands and accepts the thrust of principle 3 to be that economic development goal and objective must be pursued in such a way that development and environment needs of present and future generations are taken into account.»

UNCED Report, Vol. II, at 17 and 19. The legally binding international documents to state the right to development have been signed by developing States only, *viz.* the African Charter on Human and Peoples' Rights, Art. 22, and 1988 Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights, Preamble. Peoples' right to a certain development standards was acknowledged ('not contested') by the *ad hoc* Arbitral Tribunal in the Dispute Concerning the Delimitation of the Maritime Boundary (Guinea v. Guinea-Bissau) (1985), as «the right of the peoples concerned to a level of economic and social development which fully preserve their dignity»; 25 *ILM* (1986), 252, at Para. 123.

biodiversity and forestry⁽¹³⁹⁾. Increasing concern for global environmental issues and the linking of environmental matters with development have provided developing States with some bargaining leverage, which they did not enjoy in the general debate on development and the new international economic and marine order⁽¹⁴⁰⁾. Developing States, as the hosts of nearly ninety percent of the world's genes, species and ecosystems⁽¹⁴¹⁾, and well aware of the importance of their participation to assure the actual effectiveness of measures to reduce ozone layer depletion and global warming⁽¹⁴²⁾, have been in the position to negotiate their commitment on environmental

(139) For an overview of the respective positions of the US, the EEC countries and the developing States at the 1992 United Nations Conference on Environment and Development, see Hajost, 'The Role of the United States', in Campiglio *et al.* (eds.), *The Environment after Rio, International Law and Economics* (Graham & Trotman/Martinus Nijhoff, 1994), Chap. 2; Brusasco-Mackenzie, 'The Role of the European Communities', *ibid.*, Chap. 3; and Mensah, 'The Role of Developing Countries', *ibid.*, Chap. 4.

(140) Haas qualifies, quite appropriately, UNCLOS negotiation and the parallel to set up a new international economic order as a case of 'premature issue-packaging' strategy, adopted by the weak against the mighty; 'Why Collaborate? Issue Linkage and International Regimes', 32 *World Politics* (1979-80), 357, at 367.

(141) To mention some of them: the savannahs of Latin America; the Mangroves, characteristic of the tropical and subtropical coasts; the coral reefs, mostly found in tropical shallow water ecosystem; tropical rain forests of Tropical America, Asia and Africa; see Groombridge (eds.), *Global Biodiversity, the Status of the Earth's Living Resources*, A Report Compiled by the World Conservation Monitoring Centre (Chapman & Hall, 1992).

Besides, in a general way, biological resources tend to be more at risk in less developed countries, partly due to the strong reliance of a booming population on these resources to assure its survival, and partly due to the leniency of domestic authorities, more concerned with attracting foreign investments and promoting development than protecting the environment. Quite understandably, with developmental needs competing directly with environmental requirements for funding, developing States are very unlikely to prioritise the latter over the former. Hence for example, the Nigerian government has been widely accused of failing to apply appropriate environmental standards on the Oil exploiting Companies, mostly the Dutch/British giant Shell, operating in Ogoniland, in the Niger Delta, South Nigeria since the 1950s. Environmental activists, most famously the Nigerian writer Kenule Beeson Saro-Wiwa, have denounced the extremely poor conditions of the pipelines that criss-cross Ogoniland, which cause leaks that seriously disrupt the natural environment and contaminate the fresh water resources; see *Guardian Weekly*, 15 January 1995, 7; *The Guardian*, 11 November 1995, 3/4; 14 November 1995, 11; *Financial Times*, 16 November 1995, 4; *Le Monde*, 10 November 1995, 5; 12/13 November 1995, 1/2; 16 November 1995, 13. In an article questioning the unethical behaviour of multinationals in less developed countries to maximise profits, Martin Woollacott suspects the worst: «...corporations have gone beyond any neutrality over political conditions to develop an attachment to a particular level of bad government; not so bad as to create chaotic conditions for business, but tough enough on its citizens to ensure a combination of public order, cheap labour and low environmental and safety costs»; *The Guardian*, Outlook, 18/19 November, 1995, 27.

(142) As Prime Minister of Britain Tony Blair declared at the UN Environmental Earth Summit, convened to review the progress on sustainable development achieved five years after the 1992 United Nations Conference on Environment and Development (UNCED + V) «we are all in this together. No country can opt out of global warming or fence in its own private climate»; *International Herald Tribune*, 24 June 1997, at 6; also Beck, *supra* n. 130, at 136. Whilst developing States' contribution to the ozone layer depletion might (still) be marginal but is expected to rise considerably in the normal course of their development, developing States' contribution to greenhouse gases is far more substantial, due to (1) their strong reliance on coal and other fossil fuel, (2) extensive livestock (producing methane), and (3) deforestation more particularly in Latin America, hence reducing the 'sink capacity' of the environment; Sell, 'North-South Environmental Bargaining: Ozone, Climate Change and Biodiversity', (continued)

issues with the commitments of industrialised countries to provide them with technological and financial assistance⁽¹⁴³⁾. The stage was set, «for an exercise of linkage politics in which developing countries seek to use access to plan genetic resources as a bargaining leverage on the industrialised countries regarding technology transfer»⁽¹⁴⁴⁾.

Effective financial and technological support for developing States is no longer perceived as matter of charity to promote their development in their own interests; it has become a matter of necessary solidarity to address a common concern of mankind, in the interest and for the benefit of both developed and developing States. As Haas underlined, «issue-linkage will not succeed if States with a strong stake in the existing distribution of benefits, and the capability to control it, prefer to keep things as they are»⁽¹⁴⁵⁾. Such global bargain negotiating behaviour, also called (tactical) linkage strategy⁽¹⁴⁶⁾, was followed, *inter alia*, in the context of the amendment of the ozone layer regime, and during the negotiations on climate change, biodiversity, and forestry resources.

The adequacy of such global bargain strategy to effectively reduce climate change, ozone layer depletion, and loss of biodiversity and forestry resources remains to be proved; nevertheless, such strategy had a clear influence on the terms of financial and technological co-operation between developed and developing States on issues of common concern of mankind.

i. Financial Assistance: Additionality and Compensation

In a context of constantly dwindling financial flow to development assistance⁽¹⁴⁷⁾, emerging of environmental concerns appeared to developing States as competing

2 *Global Governance* (1996), 97.

(143) See Robertson, 'The Global Environment: Are International Treaties a Distraction?', 13 *World Economy* (1990), 111, at 124. The linkage of environmental protection and conservation, and economic development was a central argument in WCED Report; *Our Common Future* (Oxford University Press, 1987), at 67.

(144) Porter & Welsh Brown, *Global Environmental Politics* (Westview, 1991), 131; for an extremely clear review of the elements and arguments in a global bargain approach, see Porter & Welsh Brown, *ibid.*, at 148 *et sequ.*; on the advantages and disadvantages of the linkage strategy, Susskind, *Environmental Diplomacy, Negotiating more Effective Global Agreements* (Oxford University Press, 1994), Chap. 5. More generally on the linkage strategy in world politics, see Haas, *supra* n. 140; Gupta & Hisschemöller, 'Issue Linkage as a Global Strategy Towards Sustainable Development. A Comparative Case Study of Climate Change', 9 *International Environmental Affairs* (1997), 289.

(145) Haas, *supra* n.140, at 371.

(146) Porter & Welsh Brown, *supra* n. 144; Haas, *supra* n.140, at 372.

(147) A minimum of 0.7 % of the Gross National Product (GNP) of the aid-giving country was introduced in the 1961 Strategy for the First Development Decade, despite the oppositions of most donor countries, and has since been recurrently reiterated as the 'accepted United Nations' target since then; see 1970 Strategy for the Second Development Decade, Para. 43; 1980 Strategy for the Third Development (*continued*)

elements for already scarce financial resources necessary to satisfy people's basic needs⁽¹⁴⁸⁾. The dilemma of developing States *vis-à-vis* the environment is best summarised by the following statement of Indian Prime Minister Indira Gandhi at the 1972 Stockholm Conference on the Human Environment:

«[H]ow can we speak to those who live in villages and in slums about keeping the oceans and the air clean when their own lives are contaminated at the sources?»⁽¹⁴⁹⁾

To minimise the diversion of existing funds earmarked for development purposes, developing States insisted on having the principles of additionality and compensation enshrined in environmental documents⁽¹⁵⁰⁾. The first principle implies that new

Decade, Para. 24; 1990 Strategy for the Fourth Development Decade, Para. 40; it was reaffirmed in 1992 Agenda 21, Chap. 33, Para. 33.13. However, the 0.7% threshold has not only been reached by a very small number of States, mostly Nordic Countries, with the majority of States well under 0.3%, and a record of only 0.1% for the US in 1995; the *real* percentage of GNP affected to Official Development Assistance (ODA), the major source of concessionary aid, has declined from an average of 0.34% of donor countries' gross national product in 1992, to 0.27% in 1995; *Le Monde*, 28 June 1997, 2.

Besides, a majority of European States, most notably Germany and the United Kingdom, have declared themselves in favour of a reduction of the aid conceded to the ACP *via* the European Fund for Development (financial instrument of Lomé Convention), and a parallel increase in the support to the development in Eastern Europe. Though it was eventually increased of 20% as compared to the seventh EFD for the period 1990-1995, the eighth EFD, set for the period 1996-2000, means actually a *status quo*, if not a reduction of the financial contribution in real terms of the members of European Union, considering the enlargement in EU memberships to three new States (Austria, Sweden and Finland, in 1994). The strategy of liberalisation of exchanges, within the frame of the WTO, might have a serious impact on some ACP countries the production of which benefits of a preferential access to the EU market. Concerned with the safeguard of the interests of their multinationals, the US indeed already questions the banana preferential trade system, as incompatible with the sound commercial principles; tomorrow, it might well be the sugar. *Le Monde*, 7 November 1995, 5. On the other hand, the US, other major donor, is now influenced by the Republican majority in the Federal Congress, and active defender of a strategic rather than humanitarian aid strategy; the losers are African States, and the winners are Israel, Egypt and the Republics of the former Soviet Union. *Le Monde*, 5/6 February 1995, 2.

France has so far emerged rather isolated, in this general relaxing of financial support to African Hemisphere. And while Candidate Chirac promised increased contributions to a series of programmes of aid to Third-World countries, President Chirac was soon to announce drastic reductions thereof, in furtherance of Balladure's programme of rehabilitation of French public budget. Are namely affected: UNICEF, the World Food Programme, UNDP and the WHO; *Le Monde*, 11 October 1995, 5, and 30 November 1995, 5.

(148) Biswas, 'Environment and the Law: A Perspective from Developing Countries', in Dupuy (ed.) *The Future of International Law of the Environment*, Workshop, (Martinus Nijhoff, 1984), 389, at 391.

(149) Quoted after Ramakrishna, 'North-South Issues, Common Heritage of Mankind and Global Climate Change', 19 *Millennium* (1990), 439, at 439. Since 1989, there have been a clear 'redirection' of funds for development, then exclusively allocated to 'satellite' Third World countries to assure their 'alignment' with one side or another in the Cold War, towards Eastern European States to support their transition from planned economy to a capitalist model; this diversion of funds is particularly clearly reflected in the series of comparative tables on the financial flows and official development assistance to Eastern States before and after 1989; see Lacoste & Sgard, *L'Europe, La France et la Méditerranée: vers de nouveaux Partenariats*, Rapport de l'Atelier 'Méditerranée/Moyen-Orient' du Groupe 'Monde-Europe', (La Documentation Française, 1993), at 50 *et sequ.* (tables 5-7).

(150) Morgan, 'Stockholm : the Clean (but Impossible) Dream', 8 *Foreign Policy* (1972), 149, at 153 *et sequ.*

environmental initiatives are to be funded with an increase in financial inflows or new funds, rather than with the redistribution of existing funds so far allocated to development assistance. The first expression of the principle of additionality was contained in the 1972 Stockholm Declaration on the Human Environment:

«Resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate from their incorporating environmental safeguards into their development planning and the need for making available to them, upon requests, additional international assistance for this purpose.»⁽¹⁵¹⁾

The principle of compensation allows for some indemnification of a State for the sacrifice imposed *vis-à-vis* its domestic resources in the interest of the entire international community⁽¹⁵²⁾. Both principles were reaffirmed by developing States throughout the debate on sustainable development, as necessary enable them to cope with the new environmental costs without sacrificing their developmental perspectives⁽¹⁵³⁾.

The major donor States on the other hand, have always considered development assistance as a matter of goodwill⁽¹⁵⁴⁾ and have strongly resisted any attempt to have

(151) Princ. 12; likewise, 1972 Stockholm Action Plan for the Human Environment, Recommend. 109 provides that it should be ensured that «the preoccupation developing countries with their own environmental problems should not affect the flow of assistance to developing countries, and that this flow should be adequate to meet the additional environmental requirements of such countries».

(152) See 1972 Stockholm Action Plan for the Human Environment, Recommend. 103. The principle of compensation for sacrifice (*supra* n. 130) was also invoked (and endorsed), albeit in a developmental rather than environmental context, during the negotiations on the deep seabed, to minimise the loss incurred from land-based mining (developing) States, due to the emergence of deep seabed mining activities; see *supra* II/iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership.

(153) See 1989 Resolution 44/229, on International Cooperation in the Field of the Environment, preambular Para. 8; 1989 Resolution 44/228, on United Nations Conference on Environment and Development, Preambular Para. 20. See also 1989 Brasilia Declaration on the Environment, Para. 7; 1989 Belgrade Declaration of the G77. No reference however is made in 1992 Rio Declaration on Environment and Development to the principles of additionality and compensation; on the other hand, the whole implementation of 1992 Agenda 21 actually primarily rests on the financial contribution by developed States, either through the ODA (direct assistance), or through their contribution to multilateral institutions or funds dealing with development and environment (indirect assistance). Additionality and compensation were particularly at stake during the negotiation on the 1990 Amendments to Montreal Protocol on the Ozone Layer, the 1992 Climate Change Convention and the 1992 Biodiversity Convention; see *infra* 4. The Terms of the Bargain.

(154) The US, FRG, Japan, France and the UK have always contested the UN 0.7 % of GDP target for development assistance; see Flory, 'La troisième décennie pour le développement', 26 *AFDI* (1980), 593, at 599. The socialist bloc resisted any mandatory development assistance on the ground that the duty to provide assistance was linked to the responsibility of former colonial powers for underdevelopment, and could not be imposed upon States having no such responsibility; Virally, 'La deuxième décennie des Nations Unies pour le développement, essai d'interprétation para-juridique', 16 *AFDI* (1970), 9, at 14. The absence of an historical colonial link was also invoked very recently by Germany, Austria, Sweden and Denmark, at the debate concerning the aid granted to the ACP (Lomé Process); see *le Monde*, 5/6 February 1995, 2.

the obligation to provide assistance for development and fixed targets enshrined in any international document. The US issued the following statement with regard to the ODA target expressed in Agenda 21:

«The United States is not among those countries that have affirmed an overseas development assistance target. Such a target would detract from the more important issues of the effectiveness and quality of aid and the policies in the recipient country (...) The United States has traditionally been the largest aid donor in volume terms and will continue to provide high-quality aid on a case-by-case basis, in a way that encourages reform efforts in developing countries.»⁽¹⁵⁵⁾

Likewise, the major donor States have systematically opposed the recognition of the principles of additionality and compensation as legally binding in the context of international environmental law⁽¹⁵⁶⁾; they argued that such principles constitute a 'disincentive to environmental responsibility', as well as a hidden attempt to impose a mandatory duty to provide development assistance. Donor States rather favour the reallocation of existing funds⁽¹⁵⁷⁾ and the creation of a climate favourable to foreign investment. In 1972 already, the US clearly stated, in relation to the Stockholm Declaration on the Human Environment, Principle 12, that :

«[She] does not regard the text of [Principle 12], or any other language contained in the Declaration, as requiring it to change its aid policies or increase the amounts thereof. The United States of America accepts the idea that added costs *in specific national projects or activities* for environmental protection reasons should be taken into account.»⁽¹⁵⁸⁾

(155) *UNCED Report* Vol. II, at 19.

(156) Developed States recognise however that as a matter of principle, extra funds are needed to enable developing States to fulfil their environmental obligations; see for instance 1989 Paris Economic Declaration of the G7, Para. 38; 1989 Noordwijk Declaration on Atmospheric Pollution and Climate Change, Para. 26. See further references and relevant extracts in Sands & Bulatao, *Financial Mechanisms for the Climate Change Convention*, CIEL/AOSIS Background Paper 3/1991, at 2 *et sequ.*

(157) Particularly illustrative in that respect is the isolated position of the US during the debate on the funding of initiatives to protect the ozone layer and financing of alternative ozone friendly technology. Against the position of most European States, the US argued against a new special fund, and in favour of a reorientation of some of the World Bank's funds; Benedick, *Ozone Diplomacy*, (Harvard University Press, 1991), at 160 *et sequ.*

(158) UN Doc.A/CONF.48/14, at 118 (1972) (emphasis added); quoted after Sohn, 'The Stockholm Declaration on the Human Environment', 14 *Harvard ILJ* (1973), 433, at 471; see also Morgan, 'Stockholm: the Clean (but Impossible) Dream', 8 *Foreign Policy* (1972), 149, at 151 *et sequ.* In his address to the 1992 Conference on Environment and Development, President Bush declared that the US «stand to [voluntarily] increase US international environmental aid by 66% above the 1990 levels, on top of the more than \$ 2.5 billion that we provide through the world's development banks for Agenda 21 projects»; 3 Department of State Dispatch (1992), 461.

ii. Transfer of Technology

In the same way developing States consider financial assistance as a legitimate expectation flowing from the principle of compensatory solidarity and equality, not to say a right stemming from the right to development⁽¹⁵⁹⁾, they perceive the 'redistribution' of such technological and scientific knowledge on concessional or preferential basis as a *right* held essentially (albeit not exclusively) against former colonial powers⁽¹⁶⁰⁾. Technological and scientific progress has even been qualified as common heritage to be developed for and in the interest of the whole mankind, accessible to mankind as a whole. The most significant step in that direction was made by the G77 in their draft International Code of Conduct on the Transfer of Technology; the draft provides in its Preamble that «technology is part of universal human heritage and (...) all countries have the right of access to technologies to improve the standards of living of their people»⁽¹⁶¹⁾. A particularly strong rejection of commercial terms on technology transfers is contained in the 1989 Amazon Declaration in these terms:

(159) *Supra* n. 138.

(160) Hence for instance, 1975 Economic Charter, Art. 13(1) provides that «Every State has the right to benefit from the advances and development in science and technology for the acceleration of its economic and social development».

(161) Doc.TD/AC.1/9 Annex II, 17 *ILM* (1978), 462; see also draft International Code of Conduct on the Transfer of Technology, 6 May, 1980, Doc.TD/CODE TOT/33, 12 May 1981; for a review of the drafts codes by various group of countries at UNCTAD, see Roffe, 'International Code of Conduct on Transfer of Technology', 11 *JWTL* (1977), 186. On the progresses and obstacles to the drafting process in UNCTAD, see Cousin, 'Le projet de la CNUCED de Code international de conduite pour le transfert des techniques', 19 *German YbIL* (1976), 199; Graham, 'The Transfer of Technology: A Test Case in the North-South Dialogue', 33 *JIA* (1979), 1; Miller, 'Panacea or Problem? The Proposed International Code of Conduct for Technology Transfer', 33 *JIA* (1979), 43; Thompson, 'The UNCTAD Code on Transfer of Technology', 16 *JWTL* (1982), 311; also Bouveresse, *Droit et politiques du développement et de la coopération*, (Presses Universitaires de France, 1990), Para. 288. The work on the draft code of conduct in UNCTAD was suspended in 1993; see UNGA, A/Res./48/167, 21 December 1993, on International Code of Conduct on the Transfer of Technology. A parallel is sometimes drawn between the UNCTAD drafting process of the code on the transfer of technology, and UNCLOS III negotiations on deep seabed mining regime, and the cautious position of technologically advanced States justified on the ground their delegation were eager not to set a precedent at UNCLOS that could 'inspire' UNCTAD negotiations; see Treves, 'Le transfert de technologie et la Conférence sur le droit de la mer', 104 *JDI* (1977), 43, at 55 *et sequ.* As seen, although the concept of common heritage of mankind in the context of the law of the sea qualifies the deep seabed area and does not formally encompass deep seabed mining technology, one purpose of such qualification of the Area was to ensure free access to the appropriate technology, see *supra* 2/iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership (). Some authors however, undermine the importance of the linkage and mutual influence of UNCTAD and UNCLOS negotiations, underlining that the UNCTAD process had long been considered as *sui generis*, and was unknown to most UNCLOS negotiators until the late 1979; Schmidt, *Common Heritage or Common Burden?*, Clarendon, 1989, at 165.

The qualification of scientific and technological progress as common heritage of mankind was also contained in 1978 Algiers Déclaration universelle des droits du peuple, Art. 9; the Declaration was adopted by the Conference of Lawyers, Sociologists, Political Analysts, Philosophers and Economists, convened by the 'Fondation Internationale LELIO BASSO pour le droit et la libération des peuples' and
(continued)

«We expect the establishment of conditions to allow free access to scientific knowledge, to clean technologies and to technologies to be used in environmental protection and we reject any attempts made to use ecological concerns to realize commercial profits.»⁽¹⁶²⁾

Although the US, alongside other technologically advanced States such as FRG, UK and Japan, agreed in principle that technology transfer is necessary to the promotion of more sustainable practices in developing countries⁽¹⁶³⁾, they disagree on the terms thereof. They have, *inter alia*, systematically resisted all attempts to have the sharing of knowledge and technology at below commercial market or preferential or 'subsidiarised' terms embodied in a legal obligation. It was clearly stated at the 1972 Stockholm Conference on the Human Environment that any new obligations upon developed States can only result from a voluntarily accepted commitment⁽¹⁶⁴⁾.

Two major reasons are invoked to justify such opposition:

1. The great part of technology has been developed and is owned by the private sector; the decision as to its transfer lies with the private sector; it is therefore far beyond the prerogative of a liberal free-market State to force private enterprises to sell their patents and knowledge at below market conditions⁽¹⁶⁵⁾.

the 'ligue internationale pour le droit et la libération des peuples', Algiers, 1978, reproduced in Cassese & Jouve, *Pour un droit des peuples, Essais sur la Déclaration d'Alger* (Herger-Levrault, 1978). UNESCO made a similar statement, without drawing any conclusion however as to the implication; see Bedjaoui *Towards a New International Economic Order* (UNESCO, 1978), at 237-238.

(162) Para. 8.

(163) The principles of technical assistance for environmental matters was already enshrined in 1972 Stockholm on the Human Environment, Princ. 12 and 20; by contrast however, an entire chapter (Chap. 34) of 1992 Agenda 21 is devoted to the issue of technology transfer. The Seven Leading Industrial Nations identified the transfer of technology among the specific initiatives necessary to promote sustainable development in the 1989 Paris Economic Declaration of the G7, Para. 35, and in 1990 Houston Economic Declaration of the G7, Para. 72.

(164) See for instance the US position on 1972 Stockholm Declaration, Princ. 12, in Sohn, *supra* n. 158, at 472. The Economic Charter accommodates technologically advanced States opposition to a mandatory transfer of technology, and words the articles on technical (and financial) assistance as a matter of desirability (should), abandoning the language of necessity (shall) or even duty (have the duty) used throughout the document« see Articles 13(3), and 20 to 23; technical assistance is hence construed as an option left to developing countries, and not as a duty of developed States. These provisions were adopted by consensus, without abstention; see voting record in 14 *ILM* (1975), 262, at 264-64. Technical and financial assistance were equally regarded as two central principles the NIEO should be founded upon; see Princ. 4 (f), (k), (o) and (p). A similarly cautious (non mandatory) language was adopted in 1992 Rio Declaration on Environment and Development:

«States *should* cooperate to strengthen endogenous capacity-building for sustainable development, by *improving scientific understanding*, through exchanges of scientific and technological knowledge, and by *enhancing* the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies» (Princ. 9, emphasis added)

This principle was accepted without real controversy.

(165) Porter & Welsh Brown, *supra* n. 144, at 132. See US position during the deep seabed regime, *supra* 2/iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine
(continued)

2. A compulsory transfer of technology and scientific knowledge would put too heavy a burden on the private sector. The lack of appropriate consideration and protection of patent and intellectual property rights, and would seriously reduce the benefit derived by their authors from innovative technology⁽¹⁶⁶⁾. It would, in the long run, suppress any incentives for scientific and technological progress and threaten, or at least slow down, scientific development⁽¹⁶⁷⁾. The statement delivered by the US with regards to Agenda 21 and the 1992 Forestry Principles illustrates this point particularly well:

«The United States strongly believes that adequate and effective protection of intellectual property rights is an essential component of any international technology cooperation effort aimed at environmental protection and/or development assistance. Such protection is essential to provide incentives for innovation in the development of environmentally sound and appropriate technologies, and facilitates access to, and transfer and dissemination of such technologies.

The United States understands the provisions of the forest principles and Agenda 21 regarding access to and transfer of technology to mean that, in the case of technologies and know-how subject to intellectual property rights, such access and transfer shall be on freely negotiated, mutually agreed terms that recognize and are consistent with the adequate and effective protection of those rights.»⁽¹⁶⁸⁾

Partnership ().

(166) Ownership rights to technology are grounded in the various national intellectual property legislation, largely reflected at the international level by the 1883 Paris Convention for the Protection of Industrial Property; the Convention has been signed today by over 100 States, including US, Japan and former USSR. In parallel to the attempt to draft a code on the transfer of technology (see *supra*), intended, at least for developing States, to supersede 1883 Paris Convention, a procedure of revision of that Convention was opened in 1974, *inter alia* to take more into consideration the needs of developing States; the process of revision is still not concluded; Bouveresse, *Droit et politiques du développement et de la coopération* (Presses Universitaires de France, 1990), Para. 282. The establishment of a comprehensive system of protection of intellectual property rights satisfying international agreed minima of protection is now required under the TRIPs Agreements which are part of the 1994 Gatt package; see Tarasofsky, 'The Relationship Between the TRIPs Agreement and the Conventions on Biological Diversity: Towards a Pragmatic Approach', 6 *RECIEL* (1997), 148.

(167) See US position during the deep seabed regime, *supra* n.165. See also Yamin, *Biodiversity Conservation and Intellectual Property Rights*, Position Paper for the World Wide Fund for Nature (FIELD, 1994), at 21 *et sequ.*, partly reproduced under the title 'The Use of Joint Implementation to Increase Compliance with the Climate Change Convention', in Cameron *et al.* (eds.), *Improving Compliance with International Environmental Law* (Earthscan, 1996), Chap. 11.

(168) US statement is reproduced in *UNCED Report* Vol. II, at 18. Intellectual property rights were also behind the US reticence to sign the 1992 Biodiversity Convention, eventually signed by the Clinton Administration on 4 June 1993; see US declaration at UNEP Conference for the adoption of the agreed text of the 1992 Biodiversity Convention, 31 *ILM* (1992) 848; statement released by the Office of the Assistant Secretary Spokesman on 29 May 1992, in 3 *Department of State Dispatch* (1992), 423; Wirth's Statement before the Senate Foreign Relations Committee, 12 April 1994, and Annexed Statements of Understanding and the Relationship of the Convention to the TRIPs Agreement, 5 *Department of State Dispatch* (1994), 215.

Accordingly, provisions on the transfer of technology are usually expressed in terms of desirability⁽¹⁶⁹⁾; where worded in mandatory terms, they have so far been opposed by technologically advanced States, and hence rendered practically inoperable⁽¹⁷⁰⁾.

iii. Common But Differentiated Responsibility

Another contentious parameter of co-operation equally relates to the principle of solidarity and compensatory equality, and pertains to the shared responsibility assumed by all States. Developing States, while acknowledging that the protection of the environment is in the common interest of the international community as a whole, tend to shift the burden of environmental protection onto industrialised States, invoking two main grounds⁽¹⁷¹⁾:

- a) the larger share of responsibility of developed States for the present alarming rate of pollution and depletion of the environment (the 'main responsibility principle')⁽¹⁷²⁾;
- b) developed States' greater technical and financial capabilities to protect the environment.

Although certain developed States, mostly the Nordic States, have been sympathetic to the argument of a particular obligation of industrialised States to assist developing States «which will be very negatively affected by changes in the atmosphere although

(169) States were unanimous to recognise that the transfer of technology to developing States was, as a matter of principle, necessary to the acceleration of their development; the transfer of technology nonetheless was expressed in terms of desirability, and not in mandatory terms; see for instance UNGA, A/Res./2091 (XX), 20 December 1965, on Transfer of Technology to Developing Countries; 1970 Strategy for the Second Development Decade, Sect. 7 (Paras. 63 and 64); 1974 NIEO Declaration, Art. 4(p), and NIEO Programme of Action, Sect. IV; UNGA, A/Res./3362 (S-VII), 16 September 1975, on Development and International Economic Cooperation, Sect. III, Para. 3; 1980 Strategy for the Third Development Decade, Sect. G; 1990 Strategy for the Third Development Decade, Paras. 56 *et sequ.* No particular reference is made to the transfer of technology in 1961 Strategy for the First Development Decade, which stresses rather generally upon the «exploitation of scientific and technological potentialities of high promise for accelerating economic and social development»; UNGA, A/Res./1710 (XV), 19 December 1961, Para. 4(f).

(170) See *supra*, 2/iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership ().

(171) Chowdhury, 'Common But Differentiated State Responsibility in International Environmental Law: From Stockholm (1972) to Rio (1992)', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 20, at 333 *et sequ.* Such position is particularly clearly reflected in the respective declarations issued by the various regional preparatory meetings organised in the process leading to the Earth Summit; see for instance 1991 Tlatelolco Platform on Environment and Development, 1990 Bangkok Ministerial Declaration on Sustainable Development, and 1991 Beijing Ministerial Declaration on Environment and Development, respectively Paras. 6-6-8; see also 1989 Brazilia Declaration on the Environment, Princ. 12 *in fine.*

(172) Hence for instance, industrialised States produce an estimated 85 % of the total greenhouse gases; Beck, *supra* n. 130, at 138. See also Report UNEP Group of Legal Experts Meeting of Malta, 13-15 December 1990, on the Implications of Common Concern of Mankind', concept on global environmental issues; relevant extracts reproduced in Cançado Trindade (ed.), *Human Rights, Sustainable Development and Environment* (Instituto Interamericano de Desarrollo, 1995), Annex V, at 26, Para. 9.

the responsibility of many of them in the process may only be marginal today»⁽¹⁷³⁾, the general attitude of developed States towards the reference to the common but differentiated responsibility formula in a legally binding document has been extremely lukewarm⁽¹⁷⁴⁾.

The US were been frankly hostile to the idea that industrialised States would assume a greater share of responsibility than developing States with respect to certain environmental issues. Ever since the idea of common but differentiated responsibility was put forward, at the 1972 Stockholm Conference on the Human Environment, it has constantly asserted that new obligations upon developed States can only result from *voluntarily* accepted commitments⁽¹⁷⁵⁾. The US issued the following declaration of understanding of the formula «the developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development» used in the 1992 Rio Declaration on Environment and Development, Principle 7 (partnership and co-operation):

«[highlighting] the special leadership role of the developed countries, based on our industrial development, our experience with environmental protection policies and actions, and our wealth, technical expertise and capabilities. (...) The United States does not accept any interpretation of principle 7 that would imply a recognition or acceptance by the United States

(173) 1989 Hague Declaration on Environment, Para. 8; see also 1989 Resolution 44/229, on International Cooperation in the Field of the Environment, Para. 6. Norway, Finland, the Netherlands, but also New Zealand have been particularly supportive, *inter alia*, of the creation of an international fund to support and compensate the action taken by developing States in the implementation of 1987 Montreal Protocol on the Ozone Layer; Benedick, *supra* n. 157, at 126.

(174) The principle of differentiated responsibility is yet enshrined in the 1992 EU Treaty, Art. 130R.2, providing for the application of different standards for different economic conditions. Art. 130R.2 was invoked by developing States to support their claim in favour the legal status of the principle in international law; Porras, 'The Rio Declaration : A New Basis for International Cooperation', in Sands (ed.), *Greening International Law* (Earthscan, 1993), Chap. 2, at 30 n. 17. 1988 Directive 88/609/EEC, on the Limitation of Emission of Certain Pollutants into the Air from large Combustion Plants, as amended provides another example of differentiated obligation, laying down country-by-country time schedule for the reduction of sulphur dioxide emissions; [1988] OJ L336; see Sand, *Lessons Learned in Global Environmental Governance* (World Resource Institute, 1990), at 8. It is also applied within the context of greenhouse gases reduction, with less developed States exemption, that dates back from the first Conference of the Parties to 1992 Climate Convention held in Berlin during 1995, and enshrined in the Protocol negotiated at Kyoto; Rowlands, 'The Climate Change Negotiations: Berlin and Beyond', 4 *JED* (1995), 145; *Le Monde*, 11 December 1997, at 4. The US reiterated their opposition to the principle at Kyoto although it finally consented to the exemption of developing States from binding commitments (not without stating however that it would not ratify the protocol before such commitments are spelt out); *Le Monde*, 5 December 1997, at 5; Cameron, 'The 1997 Kyoto Protocol to the 1992 Framework Climate Change Convention', Paper presented at the Institut Universitaire des Hautes Etudes Internationales, Geneva, 16 March 1998.

(175) See US position on 1972 Stockholm Declaration on the Human Environment, Princ. 12, in Sohn, 'The Stockholm Declaration on the Human Environment', at 472.

of any international obligations or liabilities, or any diminution in the responsibilities of developing countries.»⁽¹⁷⁶⁾

Similar interpretation of the special responsibility of developed States as a responsibility of leadership was endorsed by the seven leading industrial States.

«Environmental challenges such as climate change, ozone depletion, deforestation, marine pollution and loss of biological diversity require closer, and more effective international cooperation and concrete action. *We as the industrialized countries have an obligation to be leaders in meeting these challenges.*»⁽¹⁷⁷⁾

4. The Terms of the Bargain

The regimes respectively adopted for the ozone layer as amended in 1990⁽¹⁷⁸⁾, climate change and biodiversity illustrate, in a very similar fashion, the 'global bargain approach', whereby developed and developing States have striven to negotiate and keep

⁽¹⁷⁶⁾ *UNCED Report Vol II*, at 17-18.

⁽¹⁷⁷⁾ 1990 Houston Economic Declaration of the G7, Para. 62 (emphasis added).

⁽¹⁷⁸⁾ The original regime of scientific, technical and legal co-operation under the 1985 Vienna Convention on the Ozone Layer and original 1987 Montreal Protocol on the Ozone Layer was couched in extremely general and largely oratory terms (1985 Vienna Convention, Arts. 4, 6(4)(d), and Annex II; original 1987 Montreal Protocol, Arts. 5(2), (3), 10(1) and (2)), with no reference made to additionality (see 1987 Montreal Protocol, Art. 10); the only concession made to developing low CFCs consuming States is a 10 year grace period (original 1987 Montreal Protocol, Art. 5), and a very general recognition of the 'circumstances and particular requirements' of developing countries (1985 Vienna Convention, preambular Para. 3); see further Tripp, 'The UNEP Montreal Protocol: Industrialized and Developing Countries Sharing the Responsibility for Protecting the Stratospheric Ozone Layer', 20 *New York University JIL & Politics* (1988), 733, at 742 *et sequ.* As a result of the lack of real commitment from industrialised States to provide financial and technical assistance to developing States, only two developing States became parties to the 1985 Vienna Convention by 1987; and despite substantive contribution from certain developing States to the deliberation leading to the original 1987 Montreal Protocol, most developing States, including China and India, representing 1/3 of the population, and currently the second and sixth world's larger emitters of carbon dioxide, abstained from ratifying it. Only five developing States ratified the 1987 Montreal Protocol before it was first amended in 1990, namely Egypt, Kenya, Mexico, Nigeria and Uganda; and indeed, no substantial exchange of technology has taken place in two years between the entry into force of the Protocol and its the 1990 Amendments; Drogula, 'Developed and Developing Countries: Sharing the Burden of Protecting the Atmosphere', 4 *Georgetown IELR* (1992), 257, 271 *et sequ.* The 1990 London Amendments to the 1987 Montreal Protocol on the Ozone Layer were hence motivated in part by the necessity to provide more incentives to encourage developing States to join the common effort to protect ozone layer. Some developing States, which contribution to global CFCs emission was modest at the time but was expected to rise substantially in the 'normal course of their development', pointed out that at their stage of development, «the costs of committing to a phase out of CFCs were much greater than the benefits to be provided by protecting the ozone layer», made it clear they could and would act only unless a fund was created to finance introduction of substitute technologies for CFCs; Sell, *supra* n. 142, at 100; see further Beck, *supra* n. 130, at 135 *et sequ.*; Benedick, *supra* n. 157, Chap. 12, and comparative table of original Montreal Protocol and 1990 Amendment at 190 *et sequ.*; Biermann, 'Common Concern of Humankind': the Emergence of a New Concept of International Environmental Law', 34 *AVR* (1996), 426, at 436 *et sequ.*; Drogula, *supra*, at 269 *et sequ.*

their respective commitments and obligations within the limits of the parameters mentioned above⁽¹⁷⁹⁾.

1) The principle of additionality is endorsed⁽¹⁸⁰⁾ and, in all three cases, the burden rests essentially upon industrialised States to provide for additional funds. No reference is made, on the other hand, to compensation, which has remained politically unacceptable to many States:

<u>1987 Protocol on the Ozone Layer as amended in 1990</u>	<u>1992 Climate Change Convention</u>	<u>1992 Biodiversity Convention</u>
<p>«The Parties shall establish a mechanism for the purposes of providing financial and technical cooperation, including the transfer of technologies, to [developing countries Parties qualifying under Art.5 of the Amendment] to enable their compliance with the control measure (...) The mechanism, contributions to which shall be additional to other financial transfers [to developing States Parties] shall meet all agreed incremental costs of [those States] in order to enable their compliance with the control measures of the Protocol. »(181)</p>	<p>«The developed country Parties (...) shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under [the Convention]. They shall also provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures [that are expressly covered by the Convention] and that are agreed between a developing country Party and the international entity or entities [appointed to operate the financial mechanism of the Convention].»(182)</p>	<p>«The developed country Parties (...) shall provide new and additional financial resources to enable developing country Parties to meet the agreed full incremental costs to them of implementing measures which fulfil the obligations of this Convention and to benefit from its provisions and which costs are agreed between a developing country Party and the institutional structure [appointed to operate the financial mechanism of the Convention]...»(183)</p>

(179) As a result, the commitments flowing from the 'bargain' are inevitably worded in more moderate (and acceptable) terms than the far reaching commitment under the original 1982 UNCLOS Part XI; some authors however feel that legal substance of the commitment has been sacrificed for the sake of acceptability; «compared with UNCLOS, the [1992 Convention on Biodiversity] provisions are vague and almost devoid of commitment and from this view point disappointed, given that the [Convention] was adopted ten years later»; Johnston, 'Sustainability, Biodiversity and International law', in Bowman & Redgwell (eds.), *International Law and the Conservation of Biological Diversity* (Kluwer Law International, 1996), Chap. 3, at 54.

(180) The US made it clear however throughout the negotiation on the 1990 Amendment to the 1987 Ozone Layer Protocol, that it understood the term of additionality as implying «the allocation of more funds specifically to ozone protection, but not necessarily allocation of funds in addition to overall foreign assistance flows»; Benedick, *supra* n. 157, at 156.

(181) Art. 10(1).

(182) Art. 4(3) and Annex II; see also 1997 Kyoto Protocol to the Climate Change Convention, Art. 11 (2) (a) and (b); on the contrary to the Ozone regime, eastern European States are not included in that category of States; they are also exempted from the obligation to contribute to the fund under the 1992 Biodiversity Convention; Art. 20; for a critics of such differential treatment, see Beck, *supra* n. 130, at 176 *et sequ.*

Additional assistance required by the implementation of the various documents is to be mutually agreed, on the basis of the evaluation of the costs generated from the shift to environmentally friendly technology, or 'incremental costs'⁽¹⁸⁴⁾; it is conveyed principally *via* a financial mechanism proper to each treaty, supplied by industrialised States and operated according to fair and representative voting procedures. Hence the 1987 Montreal Protocol on the Ozone Layer, as amended in 1990, provides for the creation of a new Multilateral Fund to finance its implementation⁽¹⁸⁵⁾; an *interim* US \$ 200 million Multilateral Ozone Fund, co-administered by UNEP, UNDP and WB, was set up in January 1991 pending the establishment of the new Multilateral Fund⁽¹⁸⁶⁾.

Despite the US declaration that the financial mechanism under the 1987 Montreal Protocol as amended «was not considered as a precedent for dealing with other international aid programs»⁽¹⁸⁷⁾, and in spite of the resistance of the US and other industrialised States (Japan, UK and Canada) to the creation of special funds, similar financial mechanisms were adopted under the 1992 Climate Change Convention and the 1992 Biodiversity Convention⁽¹⁸⁸⁾. In both instances, the Global Environment Facility

(183) Art. 20(2).

(184) Jaitly & Khanna, 'Liability for Climate Change: Who Pays, How Much and Why', 1 *RECIEL* (1992), 453, at 458; Jordan & Werksman, 'Additional Funds, Incremental Costs and The Global Environment', 3 *RECIEL* (1994), 81. The decision-making procedures described below ensure to both developed and developing States a certain control over the funds allocated for additional or compensatory assistance; one of the main requirements of the US during the renegotiation of the 1982 UNCLOS Part XI was indeed the appointment of a financial committee (and guarantee of a seat) to control the amount of fund devoted to assistance; see *supra* 2/iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership. The anticipation of incremental costs, however, raises serious problems of valuation of environmental resources, particularly difficult in the context of biodiversity; see on that aspect Burhenne-Guilmin & Casey-Lefkowitz, *supra* n. 105, at 55.

(185) Art. 10(2).

(186) UNEP, *Twenty Years Since Stockholm*, 1992 Annual Report (UNEP, 1993), at 83.

(187) Sell, *supra* n. 142, at 103. The US was particularly unwilling to adopt a similar mechanism under the Climate Convention, the implementation of which would be far more costly than the Ozone regime. For the US alone, it was estimated that the cost of implementation of the 1987 Montreal Protocol would be of US\$ 2.7 billions, as compared to the estimated US\$ 800 billions to 3.6 trillions required to cut greenhouse gases back to a reasonable degree; Sell, *ibid.*, 106; Beck, *supra* n. 130, at 150.

(188) Respectively Art. 21(3), and Arts. 21 & 31. Bilateral projects or assistance remain possible, albeit marginal, source of funds; see 1987 Montreal Protocol on the Ozone Layer as amended in 1990, Art. 10(6); 1992 Climate Change Convention, Art. 11(5). Mexico's proposal to establish a special fund was abandoned however. The creation of a 'green fund' to support the implementation costs of the 1992 Climate Change Convention and its future protocols was contemplated again at 1997 Kyoto meeting of the States Party to the Convention, at the initiative of Brazil; it was temporarily abandoned for a 'clean development mechanism', combining project-financed models, and multilateral trading system; Cameron, 'The 1997 Kyoto Protocol to the 1992 Framework Climate Change Convention', Paper presented at the Institut Universitaire des Hautes Etudes Internationales, Geneva, 16 March 1998. The 'special fund' approach to provide for additional resources to developing States was also followed *inter alia* in the 1994 Tropical Timber International Agreement (Art. 21, Bali Partnership Fund) and 1995 Straddling Fish
(continued)

(GEF) was entrusted with the mechanism on an *interim* basis⁽¹⁸⁹⁾. Developing States, disfavoured under the original GEF decision-making procedure, made their consent conditional upon the reform of the GEF decision-making procedure⁽¹⁹⁰⁾.

Stocks Agreement (Art. 26); a Wetland Conservation Fund was also created in 1990, to support the implementation of 1971 Ramsar Convention.

(189) GEF was created in November 1990 by an group of 14 industrialised State and 7 developing States, for an initial three-year period (1991-1994). The US \$ 1.3 billion pilot scheme was construed as a 'green window' that would provide additional funding on concessionary terms to developing States for economically viable environmental projects; it was initially to focus of four areas: global warming, biodiversity, pollution of international waters and stratospheric pollution; activities concerning land degradation, primarily deforestation and desertification, were also eligible for funding insofar as they relate to the four focal areas; see Instrument for the Establishment of the Global Environmental Facility, 30 *ILM* (1991), 1758. Theoretically managed *via* a tripartite arrangement that involved the World Bank, UNEP and UNDP, it soon became the 'monopoly' of the World Bank, although its secretariat is functionally independent from the implementing agencies. The association of the World Bank to GEF was particularly criticised, in the light of the notable poor environmental record of the former, but also due to its undemocratic voting procedures, largely detrimental to developing States. Despite the global arrangement reached on the voting procedure and the replenishment of its trust fund with US \$ 2 billions in 1994, GEF is still under current reorganisation in the view of becoming a permanent structure.

For a presentation of GEF activities and structure, see WB/UNEP/UNDP, *The Pilot Phase and Beyond*, Working Paper Series No. 1, May 1992; also Beck, *supra* n. 130, at 180 *et sequ.*; Gupta, *The Climate Convention and Developing Countries: From Conflict to Consensus?* (Kluwer Academic, 1997), at 101 *et sequ.*; Sands, *Principles*, Vol. I, at 736 *et sequ.* Werksman, *supra* n. 184, at 48 *et sequ.* For a review of the pros and cons of GEF as a funding mechanism for global Environmental initiatives, see Sharma, 'Building Effective International Environmental Regimes: The Case of the Global Environmental Facility', 5 *Journal of Environment & Development* (1996), 73. For a more extensive review of the various trust funds set up in international law, see Sand, *Trusts for the Earth, New Financial Mechanisms for International Environmental Protection*, Occasional Paper (Hull University Press, 1994), and Sand, 'Trusts for the Earth, New Financial Mechanisms for Sustainable Development', in Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, 1995), Chap. 11.

(190) See 1992 Biodiversity Convention, Art. 39; and further Biermann, *supra* n. 178, at 459; Gupta, *supra* n. 189, Chap. 5; Pulvenis, 'The Framework Convention on Climate Change', in Campiglio et al (eds.), *The Environment After Rio: International Law and Economics* (Graham & Trotman/Martinus Nijhoff, 1994), Chap. 7, at 107 *et sequ.*; Sands, *Principles*, Vol. I, at 739 *et sequ.* Developing and developed States are granted an equal representation and equal voting power in the Executive Committee that operates the Multilateral Fund for the Implementation of the Montreal Protocol (1987 Montreal Protocol on the Ozone Layer as amended in 1990, Art. 10(5)). The Executive Committee is composed of 14 parties, 7 from developing States qualified under the original 1987 Montreal Protocol, Art. 5, and 7 from the remaining States. Decisions are taken by consensus, or with a 'double-weighted majority', that is an affirmative vote representing the 2/3 majority of 'Art. 5 countries', and the majority of remaining countries; see Sands & Bulatao, *Financial Mechanisms for the Climate Change Convention*, CIEL/AOSIS Background Paper 3/1991, at 16-17. An agreement on GEF decision making procedure modification was reached in 1994 between the 63 participating States; see Instrument for the Establishment of the Restructured Global Environmental Facility, Geneva, 16 March 1994, 33 *ILM* (1994), 1278, and preceding Introductory Note by N. van der Praag, at 1273. The revised decision making procedure of GEF II is very similar to the Multilateral Fund for the Implementation of the Montreal Protocol; 16 seats of the 32 seat GEF Council are attributed to developing States, 14 to developed States and 2 to former socialist countries. Decisions are also taken by consensus, and if no consensus can be reached, with a 'double-weighted majority' representing the 60% of the total number of participating States (in favour developing States, composing the 2/3 or GEF participants) and the 60% of the total contributions (in favour developed States).

2) Provision is made for the transfer of technology to developing States under 'fair and most favourable terms', as necessary to enable them to implement of the various provisions of the conventions.

<u>1987 Protocol on the Ozone Layer as amended in 1990</u>	<u>1992 Climate Change Convention</u>	<u>1992 Biodiversity Convention</u>
<p>«Each Party shall take every practical step, consistent with the programmes supported by the financial mechanism, to ensure:</p> <p>(a) That the best available, environmentally safe substitutes and related technologies are expeditiously transferred to [developing States Parties]; and</p> <p>(b) That the transfers referred to in subparagraph (a) occur under fair and most favourable conditions.»(191)</p>	<p>«The developed country Parties (...) shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention.»(192)</p>	<p>«Access to and transfer of technology [that are relevant to the conservation and sustainable use of biodiversity, including biotechnology] to developing countries shall be provided and/or facilitated under fair and most favourable terms, including on concessional and preferential terms where mutually agreed, and, where necessary, in accordance with the financial mechanism [established by the Convention]. In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on terms which recognize are consistent with the adequate and effective protection of intellectual property rights.»(193)</p>

The 'fair and most favourable terms' formula used in the three conventions above, albeit falling short of the 'fair and reasonable commercial terms and conditions on the open market' formula adopted in the 1994 Agreement Relating to the Implementation of 1982 UNCLOS Part XI⁽¹⁹⁴⁾, leaves a certain margin of action to industrialised States. In a statement of understanding joined to its statement before the Senate Foreign Relations Committee urging the ratification of the 1992 Biodiversity Convention, Timothy Wirth specified that «'fair and most favourable terms' in Article 16(2) mean terms that are agreed to by all parties to the transaction»⁽¹⁹⁵⁾. Such flexibility is reinforced by the 'desirable but not mandatory technology transfer' formula adopted in both Ozone and

(191) Art. 10A.

(192) Art. 4(5); also). 1997 Kyoto Protocol to the Climate Change Convention reiterates the necessity to transfer technology but keeps silent on the terms on which such transfer is due to take place, referring instead to the relevant provisions of the 1992 Climate Change Convention; Art. 11(2)(b), and Art. 11(1).

(193) Art. 16(2).

(194) see *supra* 2/iii. Common Heritage of Mankind under the 1982 UNCLOS: Attempt to Set up a Marine Partnership.

(195) 5 *Department of State Dispatch* (1994), 216.

Climate documents. Extension of the latter expression to biotechnology was dismissed as unacceptable by developing States; as Yusuf puts it, «[i]t appeared unfair [to developing States] for the basic source materials to be regarded as freely available while derived improved materials were subject to proprietary protection»⁽¹⁹⁶⁾.

Along the same line, Ethiopia issued the following statement at the close of the Biodiversity Convention negotiations:

«Where a technology, an organism or genetic material which is patented or legally protected in any other way as an intellectual property has incorporated an organism or organisms, a genetic material or materials, a technology or technologies or any other traditional practice or practices originating in another country or countries, the patent or other intellectual property right shall not be valid in the country or countries of origin of any one of its component parts; and the benefit accruing from the application of the patent or other intellectual property right in other countries shall be equitably shared between the holder or holders of the protected right and the country or countries of origin of those components.»⁽¹⁹⁷⁾

On the other hand, the transfer of biotechnology shall only take place on concessional and preferential terms 'where mutually agreed'⁽¹⁹⁸⁾. In all three cases, royalties and licences for the acquisition of new technologies in developing countries are assimilated to incremental costs, paid for *via* the financial mechanism⁽¹⁹⁹⁾. Technology transfer should thus take place without adversely affecting the private sector or suppressing the incentive for further technological development.

(196) Yusuf, 'International Law and Sustainable Development: The Convention on Biological Diversity', 2 *African YbIL* (1994), 109, at 127.

(197) Quoted after Chandler, 'The Biodiversity Convention: Selected Issues of Interest to the International Lawyer', 4 *Colorado JIELP* (1993), 141, at 163, n.72. The Convention partly remedies to this unequal treatment of biodiversity and biotechnology by linking the access to genetic resources and access to biotechnology using those resources (Art. 16(3)). See also McConnell, *The Biodiversity Convention: A Negotiating History* (Kluwer Law International, 1996), 87.

Express reference to the transfer of biotechnology was the object of lengthy debates throughout the drafting process of the 1992 Biodiversity Convention; and the following anecdote illustrates well the bargaining strategy of developing States. As the issue of biotechnology was being discussed at the drafting committee, the US representative stood up and suggested that, considering the fact that biotechnology were still in process of being developed or at a purely experimental stage, it would be premature to even make any reference in the text of the Convention. The delegate of some developing country then took the floor and suggested that the very concept of biodiversity was still blurred, and that consequently, at this stage, it was premature to refer to biodiversity at all. The American delegate retracted, and eventually accepted to negotiate the provision on transfer of biotechnology as part of the overall policy of biodiversity preservation; informal discussion with Mr Bendahmane, INFOTERRA UNEP, Nairobi, February 1996. Further on the US position at the negotiations on the Biodiversity Convention, see Bell, 'The 1992 Convention on Biological Diversity: the Continuing Significance of US Objections at the Earth Summit', 26 *George Washington JIL & Economics* (1993), 479, at 517 *et sequ.*

(198) Similar formula adopted in the 1994 Desertification Convention, Arts. 6(e) and 18, and Annex I, Art. 5.

(199) 1987 Montreal Protocol on the Ozone Layer as amended in 1990, Art. 10(1), 1992 Climate Change Convention, Art. 4(3), 1992 Biodiversity Convention, Art. 20(2); quoted above.

Whilst the 1992 Climate Change Convention is the only binding instrument to refer explicitly to the common but differentiated responsibility principle⁽²⁰⁰⁾, the categorisation of States parties and the imposition of certain obligations such as transfer of financial and technological resources upon the one category for the benefit of the other category are clearly based on that principle. So are too the extensive reference made to the necessity to consider the specific needs of developing States⁽²⁰¹⁾. It is also probably justified to understand the 'contextual' qualification of environmental obligations of a State with such expressions as 'according to its resources' or 'insofar as possible', as contained for instance in the 1972 World Heritage Convention, Arts. 4 and 5, in 1973 CITES Art. 8(3), in 1979 ECE Transboundary Air Pollution Convention, Arts. 2, 4 and 7, and in 1985 Vienna Convention on the Ozone Layer, Art. 2(2), as allowing a certain degree of differentiated treatment for less developed countries⁽²⁰²⁾.

3) The clearest expression of the bargaining strategy followed by developing States however, lies with the general and innovative clause linking the duties of developing States to those of developed States (contingent obligations).

(200) Preambular Para. 6; Art. 3(1), Art. 4(1); see also generally 1997 Kyoto Protocol to the Climate Change Convention. The principle is also acknowledged in the 1992 Rio Declaration on Environment and Development, Princ. 7; 1992 Agenda 21, Para. 31.

(201) See 1992 Climate Change Convention, preambular Paras. 20 and 22, Arts. 3 and 4(3); 1992 Biodiversity Convention, preambular Paras. 16 and 17, Arts. 11 and 20(7); 1987 Montreal Protocol on the Ozone Layer as amended in 1990, Art. 5 and preambular Para. 7 and 9. Reference to the specific needs of developing States in relation to environmental provisions was already contained in the 1982 UNCLOS, preambular Para. 5, Arts. 61(3), 82(3), 119(1)(a) and throughout Part XI, and even before in 1972 Stockholm Declaration on Human Environment, *inter alia* at Princ. 12 and 20; it is increasingly common in recent environmental documents; see for instance 1989 Basel Convention on Transboundary Movement of Hazardous Wastes, Arts. 4(2)(e), 4(13), 10(4) and 11(1); 1992 Forestry Principles, Princ. 9(a); 1994 Desertification Convention, *inter alia* Arts. 3(d), 5, 6; 1995 Straddling Fish Stocks Agreement, preambular Para. 8, and Part VII; 1996 Protocol to 1972 London Convention on Dumping of Wastes, providing for the possibility of differential time schedule for certain provisions (Art. 26). The principle of differentiation was recently endorsed at 1997 Kyoto Conference, with the imposition of different targets of reduction of greenhouse gases upon different groups of States; 1997 Kyoto Protocol to the Climate Change Convention, Art. 10 and Annex B. This move was particularly criticised in the US by oil, power and manufacturing groups, as putting the US at severe competitive disadvantage in relation to developing nations, subjected to less stringent obligations; B. Clark, 'Yellen Upbeat on Cost of Kyoto', *Financial Times*, March 5, 1998, at 8.

(202) Magraw, 'Legal Treatment of Developing Countries : Differential, Contextual, and Absolute Norms', 1 *Colorado JIELP* (1990), 69, at 89 *et sequ.* On the consideration of special interests of developing States in the environmental context, see Magraw, *ibid.*; also Chowdhury, 'Common But Differentiated State Responsibility in International Environmental Law: From Stockholm (1972) to Rio (1992)', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 20, at 332 *et sequ.*; and more generally Slinn, 'Implementation of International Obligations towards Developing States : Equality or Preferential Treatment ?', in Butler, (ed.), *Control over Compliance with International Law* (Martinus Nijhoff, 1991), 165.

<u>1987 Protocol on the Ozone Layer as amended in 1990</u>	<u>1992 Climate Change Convention</u>	<u>1992 Biodiversity Convention</u>
«Developing the capacity to fulfil the obligations of [of developing States Parties] (...) will depend upon the effective implementation of the financial co-operation as provided by Article 10 and transfer of technology...»(203)	«The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology...»(204)	«The extent to which developing country Parties will effectively implement their commitments under this Convention will depend on the effective implementation by developed country Parties of their commitments under this Convention related to financial resources and transfer of technology...»(205)

Based on a realistic assumption that developing States do not have sufficient technical and financial means to comply fully with the duties assumed under the Conventions, the above provisions make the implementation of those duties «contingent upon the fulfilment on the part of the industrialized countries of their obligations relating to financial resources and technology transfer»(206). It has been argued that such clauses express a financial and technological conditionality, under which «developing parties need only implement their conservation and sustainable use obligations under the Convention to the extent that the developed countries meet their commitment related to financial resources and transfer of technology»(207).

Under such view, developing States would not be held liable for their failure to honour their commitment under the conventions, or at least would be justified to suspend their own compliance with international obligations, as long as developed States have failed to honour their commitments (*inadimplenti non est adimplendum* principle)(208). Such reasoning is faulty, however, in the sense that international

(203) Art. 5(5).

(204) Art. 4(7); the principle of contingent obligation was reiterated at the 1997 Kyoto Conference on climate change; 'A Kyoto, les points dérivent et se rapprochent entre les pays du Nord et ceux du Sud', *Le Monde*, 5 December 1997, at 5; see 1997 Kyoto Protocol to the Climate Change Convention, Art. 11(1), cross-referring to 1992 Climate Change Convention, Art. 4(7).

(205) Art. 20(4).

(206) UNSG Report to the Commission on Sustainable Development on *Rio Declaration on the Environment and Development: application and implementation*, E/CN.17/1997/8, 10 February 1997, Para. 41. It is very interesting to note that 1992 Agenda 21 does not reiterate the 'contingent formula' with respect to biodiversity, forestry, ozone and atmosphere, but uses it in the context of oceans management and protection; see Para. 17.2.

(207) Burhenne-Guilmin & Casey-Lefkowitz, *supra* n. 105, at 56. In favour of the thesis of conditionality, see Bell, *supra* n. 196, at 513; Biermann, *supra* n. 178, at 436.

(208) The principle of *inadimplenti non est adimplendum*, rooted in domestic law, finds application in international law in case of *substantial* violations exclusively; see 1969 Vienna Convention on the Law (continued)

environmental obligations, in the same way as international human rights obligations⁽²⁰⁹⁾, tend increasingly to transcend national interests and serve a community interest⁽²¹⁰⁾. They have thus to be fulfilled by each State *independently* from the other States' fulfilment of their own obligations, and the non-compliance by one State with its obligations does not in any way legitimise other States' non compliance, as it would do in the case of synallagmatic obligations⁽²¹¹⁾. Riedel rightly underlines that nature as such

of Treaties, Art. 60; see also *inter alia* *Tacna-Arica* arbitration (Chile v. Peru) (1922), II *RIAA*, 921, at 943-44; *The Diversion of Water from the Meuse*, *PCIJ Ser. A/B*, Fascicule No 70, Judgment of June 28th, 1937, Judge Anzilotti (diss.op.), at 50; *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa), notwithstanding Security Council Resolution 276 (1970)*, *Advisory Opinion*, *ICJ Rep.* 1971, 16, at 47; *Case Concerning the Air Services Agreement, of 27 March 1946 Between the United States of America and France* (1978), XVII *RIAA*, 417; see further *Oppenheim's International Law*, Vol. 1, § 649; Brownlie, *Principles*, at 618 *et sequ.*; *Quoc Dinh: Droit International Public*, § 203. The possibility for a State «not to comply with one or more of its obligations towards a State (...) in order to induce it to comply with its obligations (...) as long as it has not complied with those obligations» is equally enshrined in 1996 ILC Draft Articles on State Responsibility, Art. 47; on which see Arangio-Ruiz, Second Report on State Responsibility, A/CN.4/425 and Add.1, 1991 *YbILC* Vol. II Pt. 1, Paras. 33 *et sequ.*

(209) The particular character of human rights treaties was most notoriously acknowledged by the ICJ in its advisory opinion on the *Reservations to the Convention on Genocide*; the Court underlined that «...in such a convention the contracting States do not have any interests of their own; they merely have, one and all, a common interest, namely the accomplishment of those high [humanitarian and civilizing] purposes, which are the *raison d'être* of the convention...»; *ICJ Rep.* 1951, 15, at 23. Similar statement was issued with regard to 1950 European Convention for the Protection of Human Rights; ECHR Commission declared, in an early decision, that «...the purpose of the High Contracting Parties in concluding the convention was not to concede to each other reciprocal rights and obligations in pursuance their individual national interests but to realize the aims and ideals of the Council of Europe with the object of safeguarding their common heritage of political traditions, ideals, freedom and the rule of law»; decision of the Commission as to the admissibility of *Applic. 788/60*, lodged by the Government of the Federal Republic of Austria against the Government of the Republic of Italy, 11 January 1961, in *Yb European Convention on Human Rights* (1961), 116, at 138 and 140. See also Inter-American Court of Human Rights *Advisory Opinion No. OC-2/82, 24 September 1982, on the effects of reservations on the Treaty into Force of the American Convention (Articles 74 and 75)*, in 22 *ILM* (1983), 37, at Paras. 27-30.

(210) This remark applies more particularly to the three regimes considered here. See Birnie & Boyle, at 85; Kiss & Shelton, *International Environmental Law*, Chap. 1 (at 16 *et sequ.*). See also *supra* Chap. 1/4/ii/c. Limits Arising from General Environmental Considerations.

(211) The application of the principle of *inadimplenti non est adimplendum* is explicitly excluded in relation to treaties of a humanitarian character, which are not synallagmatic in essence; see 1969 Vienna Convention on the Law of Treaties, Art. 60(5); also 1996 ILC Draft Articles on State Responsibility, Art. 50(d). No reference is made in either document to environmental treaties, but such would seem consistent with the spirit and purpose of both provisions, to extend them to multilateral treaties that express norms in the common interests of States; *Quoc Dinh: Droit International Public*, § 203. Picone is among the few authors who explicitly refer to Art. 60(5) in relation to those environmental obligations that are 'unconditional'; 'Obblighi reciproci ed obblighi *erga omnes* degli stati nel campo della protezione internazionale dell'ambiente marino dall' inquinamento', in Starace (ed.), *Diritto internazionale e protezione dell'ambiente marino* (Giuffrè, 1983), 15, at 34. For a brief review of the rationale and drafting history of Vienna Convention on the Law of Treaties, Art. 60(5), see Schwelb, 'The Law of Treaties and Human Rights', 16 *AVR* (1974/75), 1, at 14 *et sequ.*; Barile, 'The Protection of Human Rights in Article 60, Paragraph 5 of the Vienna Convention on the Law of Treaties', in *Il diritto internazionale al tempo della sua codificazione. Studi in onore di Roberto Ago*, Vol. II (Giuffrè, 1987), 3. On the other hand, a State could under certain circumstances take some countermeasures, in the form for instance of trade restrictions, against a State failing to fulfil its environmental obligations; see 1973 CITES, Art. 8; 1987

(continued)

and global environmental concerns are protected by international environmental law, independently from member States and transcending States altogether. States only retain the function of triggering off a new protection regime»⁽²¹²⁾.

aaa The general reticence of developed States to pledge themselves to assist developing States further undermines such an understanding of contingent obligations. Yusuf suggests more convincingly that the principle of reciprocity reflected in the clause flows from the factual circumstances and the subject matter of the treaty - a 'statement of the obvious'⁽²¹³⁾- rather than from the legal provision of the treaty itself⁽²¹⁴⁾. In any case, such clause reserves the opportunity for developing States «to put pressure on developed States to ensure they have the necessary means to comply with the Convention»⁽²¹⁵⁾, using the environment as «leverage to secure commitments of technology and resource»⁽²¹⁶⁾.

In addition to the transfer of funds and technology resulting from 'ordinary assistance' to developing States 'to help them achieve the objectives of the Convention', funds and technology will, incidentally, be provided *via* the joint implementation procedures. The system of joint implementation was introduced only recently in international environmental law⁽²¹⁷⁾, essentially upon the request of

Montreal Protocol on the Ozone Layer, Art. 4(1); 1989 Basel Convention on Transboundary Movement of Hazardous Wastes, Art. 9(5). On the use of trade sanctions to achieve environmental purposes, see further Jenkins, 'Trade Sanctions: Effective Enforcement Tools', in Cameron *et al.* (eds.), *Improving Compliance with International Environmental Law* (Earthscan, 1993), Chap. 10; Sand, 'International Economic Instruments for Sustainable Development: Sticks, Carrots and Games', *26/2 Indian JIL* (1996), 1.

(212) Riedel, 'International Environmental Law - A Law to Serve the Public Interest? - An Analysis of the Scope of the Binding Effects of Basic Principles (Public Interest Norms)', in Delbrück (ed.), *New Trends in International Lawmaking - International 'Legislation' in the Public Interest* (Duncker & Humblot, 1997), 61, at 91. In the same sense, Kiss, 'The International Protection of the Environment', in Macdonald & Johnston (eds.), *The Structure and Process of International Law: Essays in Legal Philosophy Doctrine and Theory* (Martinus Nijhoff, 1983), 1069, at 1085-86; Picone, *supra* n. 211, at 25 *et sequ.*

(213) Boyle, 'The Convention on Biological Diversity', in Campiglio *et al.* (eds.), *The Environment after Rio* (Graham & Trotman / Martinus Nijhoff, 1994), Chap. 8, at 122. The author underlines however that such prerogative is seriously undermined by the fact that, except for the case of 'ozone regime', where the Conference of parties is competent to deal with complaints of failure to transfer resources (1987 Protocol on the Ozone Layer as amended in 1990, Art. 10(1)), there is no such procedure whereby developing States could complain from developed States' failure to abide by their duty of assistance.

(214) Yusuf, 'International Law and Sustainable Development: The Convention on Biological Diversity', *2 African YbIL* (1994), 109, at 134 *et sequ.*

(215) Boyle, *supra* n. 213, at 122.

(216) Sell, 'North-South Environmental Bargaining: Ozone, Climate Change and Biodiversity', *2 Global Governance* (1996), 97, at 105.

(217) The system originates in fact in US domestic law mechanism of 'tradable emission permits' or 'credits' schemes to control the emission of sulphur dioxide (1990 Amdts to US Clean Air Act, 42 USC, *(continued)*)

developed States⁽²¹⁸⁾; it provides that «substantive binding commitments taken on by a State can be fulfilled either in cooperation with another State and/or by measures taken in the territory of another State»⁽²¹⁹⁾. This means in practice that a State can, under certain conditions and within certain limits⁽²²⁰⁾, discharge its allocated share of commitment to address an environmental issue, either by taking abatement measures on its own territory or by investing, financially or/and technologically, low-cost abatement activities in other countries⁽²²¹⁾. Such a system, associated to tradable permits, equates

S. 7651 *et sequ.*); see Yamin, 'The Use of Joint Implementation to Increase Compliance with the Climate Change Convention: International Legal and Institutional Questions', 2 *RECIEL* (1993), 348. The 'tradable emission permit' or 'credit' allows its holder to emit a stated quantity of pollutant; holders exceeding the quantity allocated can achieve the legally binding reduction standards by «reducing their own emission or by buying emission 'credits' from other [holders] which are in a state of overcompliance with the standards and have spare credits [or permits not used] to sell, or by 'offsetting' them against any previous credits 'banked' with the regulatory agency through their own earlier compliance efforts»; Arts *et al.*, 'Joint Implementation from an International Law Perspective', in Kuik, *et al.* (eds.), *Joint Implementation to Curb Climate Change: Legal and Economic Aspects* (Kluwer Academic, 1994), at 14. On the desirable legal nature of such arrangements, *ibid.* at 56 *et sequ.*

Provision for joint implementation is made in 1992 Climate Change Convention, Arts. 3(3), 4(2)(a), (b) and (d), and 12(8); Montreal Protocol on the Ozone Layer as amended in 1990 and 1993, Arts. 2, 2A to 2E, 2(5) and 2(8)(a) and (b), and 7(4); unmodified 1987 Montreal Protocol would already allow parties to 'jointly fulfil their obligations respecting CFC consumption as long as their combined consumption was kept within the limits imposed under the Protocol. See also 1994 Protocol to the 1979 ECE Transboundary Air Pollution Convention, on Further Reduction of Sulphur Emissions, Art. 2(7). Joint implementation was a cornerstone of the negotiation and final agreement on an international protocol to the 1992 Climate Change (Framework) Convention, on the reduction of greenhouse gases at the Climate Conference held in Kyoto, 1-13 December 1997; see 'Effet de Serre: accord en vue à Kyoto sous la pression des Européens', *Le Monde* 11 December 1997, at 4; 'Two Issues Hold Up Break Through to a Climate Treaty', *International Herald Tribune*, 11 December 1997, 1 and 4. The principle was finally enshrined in the final version of the 1997 Kyoto Protocol to the Climate Change Convention, Arts. 3, 4, and 6.

(218) For an overview of States' position on joint implementation, more particularly in the context of climate change negotiation, see Gupta, *supra* n. 189, Chap. 6; King, 'The Law and Practice of Joint Implementation', 6 *RECIEL* (1997), 62; Mason, 'Joint Implementation and the Second Sulphur Protocol', 4 *RECIEL* (1995), 296; Oberthür, 'Discussions on Joint Implementation and the Financial Mechanism', 23 *EPL* (1993), 245, at 246 *et sequ.*; Yamin, *supra* n. 217.

(219) Yamin, *The Climate Change Convention and Joint Implementation: Legal, Institutional and Procedural Issues*, (Field Working Paper, 1993), at 2; see also Sands, *Principles* (Vol. I), 132-133; and Arts *et al.*, *supra* n. 217, Chap. 1.

(220) All three Convention/Protocols referred to above, which provide for a joint implementation, set forth a number of criteria and conditions to the joint implementation, *inter alia* regarding the minimum each State is to achieve individually. Besides, despite the lack of clarity of the relevant provisions in the Convention and Protocols, Sands stresses that (a) parties with specific targets and timetables assorted to their own commitments, may not implement their commitment with parties having no such target/timetable, to avoid State parties to resort to joint implementation to by-pass their own target; and (b) joint implementation purposed to promote cost-effective implementation of the Convention provisions, hence should not be allowed in absence of criteria established by the Conference of the Parties; Sands, *Principles* (Vol. I), 133.

(221) It remains unclear however, at least in the context of the Climate Convention which 'categorise' States according their level of development (see Annexes I and II), whether joint implementation can take place only between Annex I (developed) States (1992 Climate Convention, Art. 4(2)(a), and 1997 Kyoto Protocol to the Climate Change Convention, Arts. 3, 4, and 6 refer only to Annex I States), or whether it
(continued)

in sum to the commercialisation of the 'right to pollute', in exchange for clean technology and foreign currency; its prime purpose is to reduce the 'total cost of meeting aggregate environmental standards⁽²²²⁾. The procedure of joint implementation is feasible only in those cases where the source of environmental degradation, or the endangered natural resources, are not country-specific, and the requested environmental measures are not exclusively dependent upon the attitude/action of a 'host' or 'source' State⁽²²³⁾.

5. Conclusions: Regional Environmental Partnerships, Global Bargain, and International Co-ordination

The first evaluation of the actual efficiency of these 'bargained' environmental strategies is extremely limited. At the Earth Summit Review Conference, convened in New York in June 1997, the terms of 'failure' and 'broken promises' and 'écran de fumée' were commonly used to qualify the progress achieved on the environmental protection five years after UNCED. The lack of serious commitment to the reduction of carbon dioxide and other greenhouse gases both in developed and developing States, was the object of serious concern⁽²²⁴⁾. The G77 felt let down by the industrialised world, which largely failed to bring in the promised additional financial resources to help them protect the environment. As the British Environment Minister summarised, «[t]he only new money that has flowed has been from the private sector and the profits have been repatriated to the rich world»⁽²²⁵⁾. The US was put 'on the hot seat' on more than one

may involved Annex II States. 1997 Protocol however seems to restrict joint implementation to Annex I States (see Art. 6(1)). Developing States were originally hostile to joint implementation, which they consider would only benefit to developing States at least on a financial point of view. They also feared that joint implementation projects would constitute a way for developed States to evade the financial and technology transfer mechanisms set up under the relevant Conventions; see Arts, *supra* n. 217, Chap. 1; Mason, *supra* n. 218, at 298; Oberthür, *supra* n. 218, at 246 *et sequ*.

(222) On the cost-effectiveness argument, see Mason, *supra* n. 218, at 297.

(223) No provision for joint implementation is made for instance in the 1992 Biodiversity Convention, as, although the preservation of biodiversity is a common concern of mankind, its preservation involves primarily the actions from host States, whilst non host State are expected to support them by providing them technological and financial *assistance*. It is likewise very doubtful that the clauses providing for the taking of individual or joint appropriate measures, contained *inter alia* in 1985 Nairobi Convention on the Marine Environment in East Africa, Art. 4; 1985 ASEAN Agreement on the Conservation of Nature, preambular Para. 5; 1986 Noumea Convention on the Environment in the South Pacific, Art. 5 are to be construed as allowing for 'joint implementation' in the sense considered above. The same is probably true of the reference to 'individual or joint measures' to combat marine pollution from land-based sources; 1974 Paris Convention on Marine Pollution from Land-Based Sources, Arts. 1, 2, and 4.

(224) At UNCED + V, the US has reiterated its opposition to the establishment of any specific target, timetable or binding cutbacks for greenhouse gases emission reduction, supported *inter alia* by the EC.; the whole debate was finally postpone until the International Conference on Climate, to be held in Japan in December 1997; *International Herald Tribune*, 24 June 1997, 6; *International Herald Tribune*, 28/29 June 1997, 3; Harrison, 'Turning a blind eye to a plague of pollution', *Guardian Weekly*, 29 June 1997, at 12.

(225) *The Guardian*, 28 June 1997, at 2.

occasion, for failing to go far enough both at the national and international level: it was accused of being the world's largest polluter, including the world's single largest emitter of greenhouse gases⁽²²⁶⁾, and the poorest supplier of development assistance. US President Clinton left the Summit with the promise of US \$ 1 billion to be given on a five year period to support developing States in their effort to reduce the emission of greenhouse gases⁽²²⁷⁾. The overall assessment appears to indicate that States are not more committed today to a global bargain strategy than they were in 1982 to a global partnership.

Neither partnership nor global bargain, the terms of an international co-operation towards sustainable development have, in fact, never gone beyond the classic parameters of financial and technological assistance. The individual and collective advantages of a potential partnership are too intangible to outweigh the individual sacrifices it would incur. Besides, the substantial difference in the means and resources of States would imply, at least temporarily, a substantial differentiation in the contribution and responsibility of each partner.

Against the conclusion that a partnership between developing and developed States is utopian in the light of the difference in their means and in the degree of solidarity implied, one could argue that the Action Plan for the Protection of the Mediterranean is an example of regional partnership-like relation to protect a 'common heritage'⁽²²⁸⁾, that brings together States from the first, second and third worlds⁽²²⁹⁾. The Action Plan for the Protection of the Mediterranean (Med Plan) was set up in mid 1975, as UNEP's first Regional Seas Programme⁽²³⁰⁾, in response to the growing concern about the pervasive pollution of the Mediterranean⁽²³¹⁾.

(226) US alone emits 22% of the greenhouse gases, as much as the total emission by all developing States without China and India; van Beukering & Vellinga, *Climate Change: From Science to Global Politics*, Institute for Environmental Studies, Vrije Universiteit, Amsterdam, 1993, at 23.

(227) *Le Monde*, 28 June 1997, at 2. A similar commitment of US\$ 75 millions was already made by the US in 1992; it was then largely considered as «an attempt to buy off developing nations or, at best, a public relations manoeuvre to avoid the necessity of making painful commitments to reduce [domestic] greenhouse gases emissions»; Drogula, 'Developed and Developing Countries: Sharing the Burden of Protecting the Atmosphere', 4 *Georgetown IELR* (1992), 257, at 295.

(228) 1976 Barcelona Convention on Mediterranean Sea, preambular Para. 2.

(229) Birnie & Boyle, 261. The Mediterranean countries are Albania, Algeria, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Morocco, Spain, the Syrian Arab Republic, Tunisia, Turkey, and at the time of the signature of the 1976 Barcelona Convention, Yugoslavia. Albania and Israel did not originally ratify the 1976 Barcelona Convention had observer status in the Med Plan activities until they joined as full member and ratified and related Protocols in 1984 for Israel, and in 1990 for Albania. The European Community joined in 1976, and, so did Croatia in 1991, and Slovenia and Bosnia Herzegovina in 1993; The World Bank & The European Investment Bank, *The Environmental Program for the Mediterranean* (WB/EIB, 1990), 14.

(230) Sands, *Principles* (Vol. I), 297. Even though the Med Plan is, functionally, part of UNEP's
(continued)

Apart from the classic law-making dimension⁽²³²⁾, not necessarily characteristic of a partnership-like relation, the Med Plan entails joint monitoring and research, integrated management, and administrative and budgetary support. Under the Mediterranean Pollution Monitoring System, the various national scientific centres are networked together, and operate according to standardised analytical and data collection procedures, so as to facilitate the exchange of information relevant to the Mediterranean protection and avoid unnecessary duplication of research⁽²³³⁾. The major focus hence still lies in the co-ordination of national actions, and there is no provision obliging France or any other 'technologically advanced' Mediterranean States to supply the necessary technology on 'free or concessionary terms' to enable other Mediterranean States to implement the 1976 Barcelona Convention on Mediterranean and its

regional seas programme -it was conceived as a prototype for subsequent regional seas plans- and was initially funded by UNEP, it operates in an autonomous way. Generally on Med Plan, see Bliss-Guest, 'A Review of the Mediterranean Action Plan', 10 *Ocean Management* (1987), 315; Caldwell, *International Environmental Policy*, 2nd edn (Duke University Press, 1990), 159 *et sequ.*; Déjeant-Pons, *La Méditerranée en droit international de l'environnement* (Economica, 1990), 85 *et sequ.*

(231) On the sources and level of degradation of the Mediterranean, see Haas, *Saving the Mediterranean* (Columbia University Press, 1990), Chap. 1, at 27 *et sequ.*; Hinrichsen, *Our Common Seas: Coasts in Crisis* (Earthscan, 1990), Chap. 3; Ravenel, *Méditerranée: l'impossible mur* (L'Harmattan, 1995), Chap. VI; The World Bank & The European Investment Bank, *The Environmental Program for the Mediterranean* (WB/EIB, 1990), Chap. 2. Generally on the mechanism of protection of the Mediterranean, see Boxer, 'Mediterranean Pollution: Problem and Response', 10 *ODIL* (1981/82), 315; Chircop, 'The Mediterranean Sea and the Quest for Sustainable Development', 23 *ODIL* (1992), 17; Déjeant-Pons, *La Méditerranée en droit international de l'environnement* (Economica, 1990); Kiss, 'La Convention pour la Protection de la Mer Méditerranée contre la Pollution', *Revue Juridique de l'Environnement* (1977-2), 151; Leanza, 'Le régime juridique international de la mer méditerranée', 236 *RdC* (1992-V), 127; see also collection of essays in Leanza, (ed.), *Il regime giuridico internazionale del mare Mediterraneo* (Giuffrè, 1987).

(232) A series of rules have been adopted under the aegis of the Action Plan, intended to reduce the environmental impact of the activities in the Mediterranean basin, namely the 1976 Barcelona Convention on Mediterranean Sea, a framework convention supplemented with the 1976 Barcelona Dumping Protocol, the 1976 Barcelona Emergency Protocol, the 1980 Athens Protocol for the Protection of Mediterranean Sea Against Pollution from Land-Based Sources and the 1982 Geneva Protocol concerning Mediterranean Specially Protected Areas. The 1976 framework Convention was substantially modified to reflect the new tendencies of international environmental law and policy after the 1992 Conference on Environment and Development, with the adoption of the Amendments to the 1976 Convention on the Protection of the Mediterranean Sea Against Pollution, 10 June 1995 (not yet in force).

For a thorough review of the legal regime applicable to the Mediterranean Sea, including rules not specific to the Mediterranean, see Leanza, 'Le régime juridique international de la mer méditerranée', 236 *RdC* (1992-V), 127, at 179 *et sequ.* For an analysis of the Mediterranean Sea specific regime, see Déjeant-Pons, *La Méditerranée en droit international de l'environnement* (Economica, 1990), Part II; Kiss, 'La Convention pour la Protection de la Mer Méditerranée contre la Pollution', *Revue Juridique de l'environnement* (1977-2), 151; Leanza, *ibid.*, at 385 *et sequ.*

(233) On the various phases and achievements of the Med Pol, see Haas, *Saving the Mediterranean* (Columbia University Press, 1990), at 103 *et sequ.*; Hinrichsen, *Our Common Seas: Coasts in Crisis* (Earthscan, 1990), Chap. 3. The major impact of Med Pol was the so-called Med X Report, which clearly demonstrated the necessity to address the issue of land-based pollution and pollution conveyed by rivers; Haas, *ibid.*, 101.

Protocols⁽²³⁴⁾. The integrated Management component on the other hand, intended to «concilier environnement et développement dans un monde profondément inégalitaire»⁽²³⁵⁾, falls short of a genuine international management of the Mediterranean; it has mostly consisted in the adoption of a socio-economic plan, the 1979 Blue Plan, worded in a very general and programmatic way⁽²³⁶⁾. Finally, a Trust Fund was set up in 1979 to finance the Med Plan Activities⁽²³⁷⁾, partly funded with contributions from the States Parties proportionally to their respective overall contribution to the United Nations (hence to their GDP)⁽²³⁸⁾, and partly with contributions from UNEP, other UN Agencies and the European Union. The fund is operated by a small bureau of four representatives of Mediterranean States, appointed according to fair representation; each representative enjoys the same voting power, regardless of the importance of the financial contribution of States⁽²³⁹⁾.

The 'internal' funding mechanism is supplemented with funds external to the Mediterranean system. The Environmental Program for the Mediterranean is jointly

(234) With the noticeable exception of the 1980 Athens Protocol for the Protection of Mediterranean Sea Against Pollution from Land-Based Sources, initiated on the basis of the Med X Report mentioned above, and hailed as a major achievement of the Med Plan. Developing States particularly insisted on the necessity of technology transfer and due consideration for their developmental needs, to limit the influence of the measures of coastal control pollution upon their industrialisation policies, and risks of inhibition of their development in general. Hence, whilst the previous documents made no particular mention to the specific needs of developing States or technology transfer, the 1980 Athens Protocol explicitly recognises the differential level of development of Mediterranean States and underlines the necessity to duly consider developmental imperatives (preambular Para. 5), and provides for some technical assistance to developing States in implementing the Protocol. See Bliss-Guest, 'The Protocol Against Pollution from Land-Based Sources: A Turning Point in the Rising Tide of Pollution', 17 *Stanford JIL* (1981), 261; Haas, *Saving the Mediterranean* (Columbia University Press, 1990), at 67 *et sequ.* and 110 *et sequ.*

(235) Ravenel, *Méditerranée: l'impossible mur* (L'Harmattan, 1995), 25; also Déjeant-Pons, *La Méditerranée en droit international de l'environnement* (Economica, 1990), at 206 *et sequ.*

(236) Haas considers the integrated management component as the least successful dimensions of 1976 Mediterranean Action Plan; Haas, *supra* n. 234, at 118. In 1992, the Ministers of the Environment of the Countries of the Mediterranean Basin and a Member of the E.C. Commission undertook to draft a long term strategy to achieve sustainable development in the region; see 1992 Declaration on Euro-Mediterranean Cooperation. No such strategy has been adopted yet, although 1976/95 Barcelona Convention on Mediterranean Sea is significantly more specific than 1976 Barcelona Convention on Mediterranean Sea.

(237) Before 1979, the financial aspect of the Plan was assumed by UNEP, with some additional financial support from France; Haas, *supra* n. 234, at 120.

(238) Which means that, in theory, France is to assume the lion's share of governmental contributions (nearly 40%); in practice however, France has seriously failed to honour its financial commitments.

(239) Such system was, expectedly, strongly opposed by France, which feared that its interests would not be assured due consideration under such procedure; it favoured instead, an all States body to manage the fund and allocate resources; Haas, *supra* n. 234, at 125 *et sequ.* An Interests Guarantee Fund was also set up on the proposal of Morocco, to compensate the cleaning up costs in case of emergency. Due to France's opposition, the Fund was adopted (with the French reservation) in a Resolution of the Conference of the Parties, rather than directly embodied in the 1976 Barcelona Convention on Mediterranean Sea; Haas, *supra* n. 234, at 109.

administered by the World Bank and the European Investment Bank, «to add impetus to this regional movement» and support short and long term objectives⁽²⁴⁰⁾. One major achievement has been the launching of a Multi-Year Environmental Technical Assistance Program in 1990, with the initial funding of UNDP, the World Bank, the European Investment Bank and the European Union, to assist States Parties to 1976 Barcelona Convention on Mediterranean Sea in the implementation process. The Environmental Technical Assistance Program provides direct assistance in the form of grants, and focuses on those countries with high resources constraints; the funds attributed are additional to the already existing loans for environmental programmes of all four institutions.⁽²⁴¹⁾

When assessing the importance of the Mediterranean initiative as an example of regional partnership, a number of elements have to be taken into account:

- 1) Regional initiatives are often better targeted and more adapted to the needs and means of each State than universal or quasi universal ones. Besides, the bond of solidarity is undoubtedly stronger between neighbouring States, or between a small circle of States; «cooperation is easier in small groups, where mutual verification is easier and less expensive»⁽²⁴²⁾.
- 2) Furthermore, the importance of the Mediterranean Sea pertains essentially to its navigational, and to a lesser extent, recreational functions, more than to its scarce mineral and fishery resources. Accordingly, the negotiations on the Mediterranean Sea have revolved mostly around the issue of protection against pollution derived from intensive navigation and urbanisation of its shores⁽²⁴³⁾, and did not stumble over the issue of equitable sharing of mineral resources and transfer of appropriate technologies for the extraction of mineral resources, as UNCLOS III did. On the other hand, as long as the major focus lay on pollution, France, and in some respect Italy, had most to gain from this regional cooperative effort as the major polluters of the Mediterranean, at least at the early stage of the process, and considering that most of

(240) The World Bank & The European Investment Bank, *The Environmental Program for the Mediterranean* (WB/EIB, 1990), at 59.

(241) On these additional funding mechanisms, see generally The World Bank & The European Investment Bank, *The Environmental Program for the Mediterranean* (WB/EIB, 1990), Chap. 5.

(242) Haas & Sundgren, 'Evolving International Environmental Law', in Choucri (ed.), *Global Accord* (MIT, 1993), 401, at 403.

(243) The problem of pollution is further aggravated by the facts that the Mediterranean Sea is a semi-enclosed sea with particularly low tide, hence extremely slow self-regenerative processes; the geo-physical particularities of the Mediterranean sea have also been invoked to substantiate the assertion that general rules on the law of the sea were inappropriate to adequately address the specific characteristic and needs of the Mediterranean sea; Leanza, 'Le régime juridique international de la mer méditerranée', 236 *RdC* (1992-V), 127, at 137 *et sequ.* and 144 *et sequ.*

the obligations under the Mediterranean regime did not commit them further than they already were committed under international and EC laws⁽²⁴⁴⁾.

The need to preserve the sea against pollution undoubtedly provides a better incentive for partnership-like relations than the common exploitation and equitable sharing of the benefit derived from the common exploitation of marine resources⁽²⁴⁵⁾. There has been an increasing tendency however, within the frame of the 'Rio-isation' of the convention, to stress the issues of common but differentiated responsibility, and transfer of technology and fund to enable developing States to implement the Mediterranean regime⁽²⁴⁶⁾. Even though the Mediterranean Action Plan represents «an incipient new order of international cooperation for environmental protection, based on more comprehensive patterns of national and international environmental policy making», it benefited from a degree of solidarity and real common goals, and various converging interests lacking at a more global level.



(244) Which is either not binding upon or not ratified by the other developing Nations Parties to the Med Action Plan; Haas, *supra* n. 234, at 199. The major duty extending beyond existing international obligations under international and European environmental law, related to the financial obligation to contribute to the trust fund, was largely neglected by those more heavily burdened; and indeed, had it not been for external sources of funding, Med Plan would have run into serious financial difficulties.

(245) It is interesting to note indeed that the Mediterranean States were far from unanimously in favour of 1982 UNCLOS; apart from France, strongly reticent to the original Part XI, Albania, Israel (two 'late-joiners' of the Mediterranean initiative) and Turkey abstained from even signing by 1992 UNCLOS.

(246) See 1976/95 Barcelona Convention on Mediterranean Sea, Arts. 4 and 13; and 1994 Tunis Declaration for Sustainable Development in the Mediterranean Basin, emphasising the necessity to promote and develop North-South solidarity.

CHAPTER SIX
PRINCIPLES PERTAINING TO PUBLIC PARTICIPATION IN INTERNATIONAL
ENVIRONMENTAL LAW AND POLICY

1. <u>Introduction</u>	278
2. <u>Individuals in General International Law</u>	283
3. <u>Towards a More Holistic Approach to International Environmental Law: the Environment-Human Rights Law Dimension</u>	286
i. Use of Human Rights Procedures to Preserve Individual Environmental Interests.....	292
ii. Towards a More Effective Exploitation of Human Rights Mechanisms to Preserve Individual Environmental Interests.....	300
iii. Strength and Weakness of the Human Rights Mechanisms in Protecting Environmental Interests.....	305
4. <u>Women Participation and Women Interests Clauses in Environmental Documents: Desirable or Regrettable Evolution?</u>	311
i. Origins of Women Participation and Women Interests Clauses: Evolution in the Perception of Women's Role at the International Level: Recognition of Women's Roles in Economic Development.....	319
ii. Women and the Environment	323
iii. Advancement of Women to Protect the Environment, or Protection of the Environment to Enhance the Advancement of Women?	328
5. <u>Conclusions: Satisfaction of Human Rights, Advancement of Women, Promotion of Development, and Protection of the Environment: Related, Parallel but Distinct Processes</u>	330

1. Introduction

A remarkable characteristic of recent international environmental law instruments lies in the importance attached to public participation. Express reference to public participation, or individuals or groups' interests, now a common feature in the context of international development process⁽¹⁾, is a fairly new phenomenon in the area of

(1) Whilst no particular reference is made to peoples participation in the 1961 Strategy for the First Development Decade, subsequent strategies reflected an ideal of human development hence emphasising the need for the full participation of human beings in the development process. Some of the major groups referred to in 1992 Agenda 21 Section III had already been identified in 1970 Strategy for the Second Development Decade, namely children and youth, and women; see Paras. 18(f), (g), and (h), and Paras. 70, 78 and 84; see also 1980 Strategy for the Third Development Decade, Paras. 8, 46, 50, 51 and 163; 1990 Strategy for the Fourth Development Decade, Paras 74 and 76 (farmers), Para. 94 (elderly people). See also 1994 *Agenda for Development*, Para. 87. One can also mention the doctrinal debate on a so-

international environmental protection⁽²⁾ and one which has been amplified since the 1992 Conference on Environment and Development⁽³⁾. By contrast with the previous global environmental 'agenda'⁽⁴⁾, 1992 Agenda 21 abundantly acknowledges the importance of the participation⁽⁵⁾ and involvement⁽⁶⁾ of, and partnership(s)⁽⁷⁾, with all sectors of society, and indeed dedicates an entire section to the major social groups playing a critical role in its implementation⁽⁸⁾. Similar references to the participation of

called human right to development, initiated in the 1970s; see references *supra* Chap. 5, Principle of Partnership, n. 131 *et sequ.* (CR).

(2) Sporadic references to the need to increase popular environmental awareness were made in previous documents, such as 1968 African Convention on Nature, Art. XIII; 1972 World Heritage Convention, Art. 27; and 1979 Bern Convention on the Conservation of European Wildlife, Art. 3; 1985 ASEAN Agreement on the Conservation of Nature, Art. 16. No reference to public participation is contained either in 1979 Bonn Convention on the Conservation of Migratory Species, or in 1973 CITES.

(3) See further mention of public information and/or participation in 1992 ECE Industrial Accidents Convention, Art. 9; 1992 ECE Watercourses Convention, Art. 16 (public information only). 1994 Timber Agreement contains similar references as the 1992 Forestry Principles, *supra* n. 11, and the 1994 Desertification Convention, preambular Para. 20, Arts. 5(d), 10(2)(f), 11 and 19. Whilst the importance of public awareness and active participation, and the specific role of certain groups were duly acknowledged by the WCED (*inter alia* 1987 WCED Report at 38, 64, Chap. 4), no specific reference to public participation, public awareness or the participation of specific groups was included in 1986 WCED-EG Legal Principles for Environmental Protection and Development, although the first Article recognises a right to 'adequate environment' for peoples' health and well being; see *infra* n. 58. On the other hand, the 1995 IUCN Draft Covenant on Environment and Development makes extensive reference to indigenous peoples and local communities needs, interests and participation (Arts. 44(1) and 12 (6)), and stresses the importance of public information and participation (Art. 12(3)).

(4) 1972 Stockholm Action Plan on the Human Environment, albeit purporting to be a plan for 'human development', was strictly worded in terms of joint and individual State action, and contains no particular reference to popular participation, nor to major groups. On the other hand, the 1972 Stockholm Declaration on the Human Environment states that human development must be promoted in a common effort from governments, peoples, enterprises and various regional and national institutions; preambular Para. 7.

(5) See Paras. 2.6; 1.3; 3.2; 3.7(d); 5.12; and consistent reference in Chap. 7, 8, 11, 12-15, 17, 18, and throughout Section IV (Implementation).

(6) Whilst the French version is essentially worded in terms of 'participation', the English version occasionally refers to 'involvement' of people for no apparent reason, since there is no clear difference of meaning between participation and involvement; see Paras. 3.4; 5.46; 6.4; 6.5(b)(i); 8.3(c); 8.39; 12.14(b); 12.57(d); 14.14(a) and (b). Other terms are used apparently as synonymous with participation (as the French version reveals), such as 'incorporation' of people (Para. 11.27), and 'attendance' of peoples (Paras. 6.12 and 6.27(c)(ii)).

(7) See *supra* Chap. 5/1. Introduction. As seen, at the inter-state level, partnership appears to express ideals of co-operation and assistance; at the state to individual level, it is essentially used as synonymous to participation and involvement. In no case does the term partnership appear to be construed as a transposition in international law of the domestic legal institution of partnership.

(8) Section III. It is important to make a clear distinction between the expression 'major groups' to be actively involved in sustainable development, as used in Section III, and the expression 'vulnerable groups', also used in the Agenda, this time to qualify those sectors of the society whose needs and interests need to be duly considered and satisfied in strategies towards sustainable development. There are two major differences in these formula: (1) the participation of the major groups is active, whilst vulnerable groups remain passive (consideration of interests); (2) the expression 'major groups' refers to a defined set of 'social entities', whilst 'vulnerable groups' refers to different social groups according to the dimension of sustainability considered, bearing in mind that the not all social groups are necessarily

peoples, groups of people, and individuals are contained, *inter alia*, in the 1992 Rio Declaration on Environment and Development⁽⁹⁾, the 1992 Biodiversity Convention⁽¹⁰⁾, the 1992 Forestry Principles⁽¹¹⁾, and, to a lesser extent, in the 1992 Climate Change Convention⁽¹²⁾.

As a matter of fact, non-state actors, and more particularly NGOs⁽¹³⁾, have always been closely involved in the elaboration and implementation of international environmental law and policy. Among the most obvious examples, one can mention the leading role assumed by NGOs in the formative stages and implementation of the 1973

affected by development and environmental degradation as a whole and to the same degree. Hence for instance, the vulnerable groups to be particularly considered in the context of demographic policies encompass *inter alia* rural landless workers, ethnic minorities, refugees, migrants, displaced peoples and women heads of household; Para. 5.21. In the context of anti-poverty policies, the vulnerable groups identified are women, youth, indigenous peoples, and local communities; Para. 3.2. In context of human health policies, the vulnerable groups include infants and children, youth, women, indigenous people and their communities; Paras. 6.18 *et sequ.* See also vulnerable groups in the context of human settlement (Para. 7.4), protection of global atmosphere (Para. 9.11), management and planning of land resources (Para. 10.10), desertification and drought (Paras. 12.26 *et sequ.* and 12.45 *et sequ.*), sustainable mountain management (Para. 13.13 and 13.14), sustainable agriculture (Para. 14.17), and protection of biodiversity (Para. 15.4).

(9) The terms 'major groups' was coined at the 1992 United Nations Conference on Environment and Development, and testifies of States' recognition of «both the unprecedented number and diversity of social and economic actors that contributed to the UNCED process, and the significant role they would continue to play in the follow-up phase»; UN Secretary-General's Concise Report on Chapter 23-32, Agenda 21, on *The Role and Contribution of Major Groups*, E/17.CN/1997/2, Addendum 22, at 2-3. The 1992 Rio Declaration on Environment and Development does not use the expression of major groups and refers more restrictively to women (Princ. 20), youth (Princ. 21), indigenous peoples and local communities (Princ. 22), and people under oppression (Princ. 23); see references *infra* n. 1 and 168.

(10) Preambular Para. 12 acknowledges the particular relation of dependence binding indigenous and local communities to their environment, whilst Para. 13 recognises the vital role played by women in the conservation of the environment; and Art. 13 relates to public awareness and education. The importance of integrating indigenous knowledge is underlined throughout the convention.

(11) The importance of the participation of 'interested parties, including local communities and indigenous people, industries, labour, non governmental organisations and individuals, forest dwellers and women' is acknowledged in Princ. 2(d), and the necessity to recognise the identity, culture and right of those same groups is expressed in Princ. 5(a). Further reference is made to women's participation in Princ. 5(b) and to local communities' needs for alternatives options in the light of their particular dependency on forestry resources for their survival (Princ. 9(b)).

(12) Art. 6.

(13) On the leading role of NGOs in international environmental law and policy, see Burhenne, 'The Role of NGOs', in Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, 1995), Chap. 13; Cameron, 'Future Directions in International Environmental Law: Precaution, Integration and Non-state Actors', Paper presented at the Read Memorial Lecture for 1995, 19 *Dalhousie LJ* (1996), 122, at 134 *et sequ.*; Lindborg, 'Future Role of Non Governmental Organisations in International Environmental Negotiations', in Susskind *et al.* (eds.), *Environmental Treaty Making* (Program Negotiations at Harvard Law School, 1992), 1; Sands, 'The Role of Non-Governmental Organizations in Enforcing International Environmental Law', in Butler (ed.), *Control over Compliance with International Law* (Martinus Nijhoff, 1991), 61; Stairs & Taylor, 'Non-Governmental Organizations and the Legal Protection of the Oceans: A Case Study', in Hurrell & Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, 1992), Chap. 4.

CITES⁽¹⁴⁾ and the 1971 Ramsar⁽¹⁵⁾, and the role attributed to NGOs in the monitoring process of 1987 Montreal Protocol on the Ozone Layer⁽¹⁶⁾, the 1992 Climate Change Convention⁽¹⁷⁾, the 1992 Biodiversity Convention⁽¹⁸⁾, in the revised GEF mechanism⁽¹⁹⁾. One should also acknowledge the contribution of NGOs to the drafting of an international covenant on development and environment⁽²⁰⁾. NGOs have also proved an important lobbying force in international political fora, capable of influencing indirectly the formal legal process; they have been particularly active, for instance, throughout the process leading to, and during the 1992 Conference on the Environment and Development, the 1995 Fourth World Conference on Women. As already mentioned, NGOs had observer status at the 1997 International Ministerial Conferences on the Protection of the North Sea⁽²¹⁾. Clearly, as a matter of political fact, «the time is long past in which states alone acted as 'subjects' of international law»⁽²²⁾.

On the other hand, the recognition of a *political* role to non-state actors in international environmental affairs, and indeed the apparent urgent necessity to involve the public, individuals, groups of individuals and NGOs in international environmental

(14) Cameron, *ibid. supra* n.13.

(15) See *inter alia* Art. 8; Bowman, 'The Ramsar Convention comes of Age', 42 *Netherlands ILR* (1995), 1, at 35 *et sequ.*

(16) Art. 11(5).

(17) Art. 7(6).

(18) Art. 23(5).

(19) See 1994 Instrument Establishing the Global Environmental Facility, Art. VI.

(20) See for instance IUCN's Draft International Covenant on Environment and Development; see also IUCN/UNEP/WWF, *World Conservation Strategy* (IUCN/UNEP/WWF, 1980); IUCN/UNEP/WWF, *Caring for the Earth* (IUCN/UNEP/WWF, 1991), *supra* Chap. 1/3. Evolutionary Perspective of Sustainable Development. The International Union for the Conservation of Nature and Natural Resources was set up in 1948 on the initiative of the French Government, is an NGO composed of conservation groups, States and public law entitled such as universities and research institutes, which purpose is to evaluate the status of natural resources, encourage the taking of conservation measures, and educate and inform about conservation issues. It was renamed the World Conservation Union in 1988, on the occasion of its 40th anniversary. IUCN/WCN played a particularly active role in the drafting of several conventions related the conservation of nature and natural resources, and most particularly, the 1968 African Convention on Nature, 1973 CITES and 1979 Bonn Convention on the Conservation of Migratory Species, as well as in the elaboration of the 1982 World Charter for Nature; see Maffei, *La protezione internazionale delle specie animali minacciate* (CEDAM, 1992), at 262 *et sequ.*

(21) *Supra* Chap. 3, Prevention and Precautionary Principles, n. 50 (CR). See also the impact of NGOs *via* legal action, like in the American Cetacean Society *et al.* v. Malcolm Bladrige *et al.*, 1985, 604 F Supp 1398 (DC 1985); confirmed in Appeal, 768 F 2d 426 (1985); reversed by US Supreme Court, Japan Whaling Association & Japan Fisheries Association v. American Cetacean Society *et al.*, 29 L Ed 2d 166.

(22) Sands, 'The Environment, Community and International Law', 30 *Harvard ILJ* (1989), 393, at 400; also Mansbach *et al.*, *The Web of World Politics, Nonstate Actors in the Global System* (Prentice-Hall, 1976), at 39 *et sequ.*

law contrast sharply with the rigid stance of the doctrine on the *formal legal* status of these 'political actors' in international law. This raises the question of the 'raison d'être' of public participation clauses in international environmental law, and their implications for the 'recipients' of such clauses.

It is argued here, that 'public interest' or 'public participation' clauses in international environmental law instruments reflect in fact a more holistic conception of the various branches of international law⁽²³⁾. It is denied, on the other hand, (a) that such clauses indicate a fundamental reorganisation of the international *legal* order towards so-called a people-centred order⁽²⁴⁾ and (b) that they bring a reconsideration of the formal status of individuals and other non-state entities in international law⁽²⁵⁾.

Public participation involves a wide range of non-state entities apart from NGOs, including individuals and groups of individuals such as farmers, children, women and indigenous populations, but also other entities such as industries and scientific communities⁽²⁶⁾. This Section focuses, in a first stage, on the involvement of individuals *qua* individuals (rather than as members of a particular group), and in a second stage, on women. This latter focus is essentially justified in the light of the original objective of the thesis to contemplate the role of women in sustainable development⁽²⁷⁾. The author is aware, however, that a consideration of the role of NGOs would have been probably more appropriate in a thesis devoted to the protection of the environment. Our focus could also be explained by the scant legal literature on women and sustainable development, by contrast with the substantial literature dedicated to NGOs' participation⁽²⁸⁾.

(23) *Infra* 3. Towards a More Holistic Approach to International Environmental Law: the Environment-Human Rights Law Dimension.

(24) See *contra*, Grossman & Bradlow, 'Are We Being Propelled Towards a People-Centred Transnational Legal Order?', 9 *American University JIL & Policy* (1993), 1.

(25)

Infra

2. Individuals in General International Law.

(26) See for instance the various major groups referred to in 1992 Agenda 21, Section III; *supra* n. 1. For some background references on various other 'categories' of individuals, see Craig & Ponce Nava, 'Indigenous Peoples' Rights and Environmental Law', in UNEP (ed.), *UNEP's New Way Forward: Environmental Law and Sustainable Development* (UNEP, 1995), Chap. 8; Pevato, 'Do Children Have a Role to Play in Environmental Protection?', 2 *IJ Children's Right* (1994), 169; Shutkin 'International Human Rights Law and the Earth: the Protection of Indigenous Peoples and the Environment', 31 *Virginia JIL* (1991), 479. See also various country specific studies in Ghai & Vivian, *Grassroots Environmental Action, People's Participation in Sustainable Development*, (Routledge, 1992).

(27) See Chap. 1/2/ii. Approach and Methodology, second point.

(28) See *inter alia* references *supra* n. 13 to 21.

2. Individuals in General International Law

A striking feature of the literature on the position of individuals (and other non-state actors) in the international legal order relates to the immutability of the arguments and positions through time, and the lack of innovative arguments offered even in most recent contributions⁽²⁹⁾, despite a clear evolution in the 'international political role' assumed *inter alia* by individuals and NGOs. The doctrinal debate on the position of individuals in international law revolves essentially around two issues: (1) the definition of the subjects of international law, and (2) the formal status of non-state entities, and more particularly of individuals, in international law.

A first controversy with regard to the definition of the international subjects pertains to the source of such definition. For a minority of authors, the quality of subject of international law depends directly on the definition of international law itself. Hence, the only subjects of international law are *per definitionem* States or individuals, depending on whether international law is construed as an inter-state law⁽³⁰⁾ or as the crystallisation of behavioural rules inferred from the relations between two or more distinctive groups of human beings⁽³¹⁾.

(29) In fact, the most remarkable contributions on the issue, with some exceptions, date back from the 1950s-1960s, if not earlier, as indicated even by the most recent bibliographies on the issue; see for instance references in *Oppenheim's International Law*, Vol. 1, Chap. 8 (§§ 347 *et sequ.*); also Menon, 'States, International Organizations and Individuals as Subjects of International Law', 20 *The Korean Journal of Comparative Law* (1992), 97; Partsch, 'Individuals in International Law', in Bernhardt (ed.), *Encyclopedia of Public International Law*, Instal. 8 (North-Holland, 1985), 316.

(30) Anzilotti, *Cours de Droit International* Vol 1 (Recueil Sirey, 1929), 121; Bourquin, 'Règles générales du droit de la paix', 35 *RdC* (1931-D), 5, at 42; Spiropoulos, 'L'individu et le droit international', 30 *RdC* (1929-V), 195. Spiropoulos already recognised however that the definition of international law needed to be adapted to accommodate the factual involvement of individuals in the international sphere, stressing that «[o]n peut retarder l'évolution sans pouvoir à la longue l'entraver»; *ibid.*, at 247; see suggested alternative definition of international law at 228. The First three editions of *Oppenheim's International Law* also expressed the view that States only are subjects of international law, as underlined (yet dismissed) in *Oppenheim's International Law*, Vol. 1, §7, at n.1. The inter-State conception of international law as excluding *per definitionem* the international subjectivity of individuals generally prevailed among the Soviet authors; for a review of that doctrine, see Feldman, 'International Personality' 191 *RdC* (1985- II), 343, at 351-363; Mullerson, 'Human Rights and the Individual as Subject of International Law: A Soviet View', 1 *EJIL* (1990), 33.

(31) Duguit was most eminent representative of this school of thought; *Traité de Droit Constitutionnel*, Tome I: *La Règle de droit, le Problème de l'état*, 3rd edn (E. de Boccard, 1927), Chap. 1 (more partic. § 17 on 'la norme juridique intersociale'); see also Scelle, *Précis du Droit des Gens*, Tome I, *Introduction, Le Milieu Intersocial*, (Sirey, 1932), at 6 *et sequ.*; Scelle, 'Règles générales du droit de la paix', 46 *RdC* (1933-IV), 327, at 343. Politis is sometimes associated with this current of thought, even though he recognised that international law is in a transitional stage on this point, and that in practice, individuals are not treated as real subjects of international law; Politis, *The New Aspects of International Law*, (Carnegie Endowment for International Peace, 1928), Chap. II. Likewise, Kelsen stated that «comme tout droit, le droit international est bien lui aussi, une réglementation de la conduite humaine», although he generally recognised a limited capacity to the individuals; 'Théorie générale du droit international public: problèmes choisis', 42 *RdC* (1932-IV), 118, at 142.

For the majority of the 'contemporaneous' doctrine, however, the qualification as a subject implies a number of functional qualities, namely the substantive capacity to hold international rights and bear international obligations, and the procedural capacity to invoke these rights and to be held responsible in case of non-fulfilment of these obligations. A certain consensus exists among authors regarding the minimum requirements of the substantive capacity to hold rights and bear duties⁽³²⁾. Some scholars consider that these minimum requirements are sufficient to confer international personality⁽³³⁾. Others on the contrary contend that the procedural capacity⁽³⁴⁾, or the capacity to be held responsible for the breach of international duties⁽³⁵⁾, or both⁽³⁶⁾, or

(32) See Kelsen and Verdross, *infra* n. 34; Lauterpacht, *infra* n. 33; Guggenheim, *infra* n. 36. See however Eustathiades, 'Les sujets du droit international et la responsabilité internationale, nouvelles tendances', 84 *RdC* (1953-III), 401, at 410 *et sequ.*; Eustathiades argues that the quality of subject of international law does not necessarily imply a 'coincidence *quo ad material* entre 'droits internationaux' et 'obligations internationales'' and concludes that the international personality implies alternatively, but not necessarily cumulatively, the capacity to hold international rights and the capacity to invoke them, or the capacity to bear international duties and to be held responsible in case of non fulfilment. This viewpoint seems to be endorsed by Barberis, although this author links the quality of subject of a right or obligation to the effective exercise of the related procedural capacity, rather than the mere formal attribution of a right or imposition of obligation. In other words, the subject of a right/obligation is the entity/person who actually invokes that right or is held responsible, and not necessarily the entity/person formally entrusted with the right/obligation; Barberis, 'Nouvelles Questions Concernant la Personnalité Juridique Internationale' 179 *RdC* (1983-I), 145.

(33) Lauterpacht, 'The Subjects of the Law of Nations', Part I, 63 *LQR* (1947), 438, and Part II, 64 *LQR* (1948), 97; Lauterpacht, *International Law*, Collected Papers Vol. I (Cambridge University Press, 1970), at 279 *et sequ.*; Lauterpacht stresses that the procedural handicap is not a particularity of international legal system, and does not deprive the entity or person concerned of the quality of subject of international law. The PCJI's dictum in the *Peter Pázmány University* case has often been referred in this context, whereby the Court stated that «the capacity to possess civil rights does not necessarily imply the capacity to exercise those rights oneself. No argument against the University's personality in law can therefore be deduced from the fact that it did not enjoy the free disposal of the property in question»; *Appeal From a Judgment of the Hungaro-Czechoslovak Mixed Arbitral Tribunal, (The Peter Pázmány University v. the State of Czechoslovakia)*, *PCIJ Ser. A/B*, Fascicule No 61, Judgment of December 15th, 1933, at 231. See also Korowicz, 'The Problem of International Personality of Individuals', 50 *AJIL* (1956), 539. Korowicz recognises however that without procedural capacity, individuals remain purely potential subjects of international law.

(34) Brownlie, *Principles*, Chap. III; Kelsen, 'Théorie générale du droit international public: problèmes choisis', 42 *RdC* (1932-IV), 118, at 141 *et sequ.*; Kelsen, *General Theory of Norms*, Transl. Hartney (Clarendon, 1991), at 52-55 & 89-91; *Quoc Dinh: Droit International Public*, § 424; *Oppenheim's International Law*, Vol. 1, at § 374; Verdross, 'Règles générales du droit international de la Paix', 30 *RdC* (1929-V), 271, at 347-9; Verdross, *Völkerrecht*, 4th edn (Springer, 1949) at 127-131 & 155-161. Verdross considers however that the procedural capacity does not need necessarily to be exercised in front of an international tribunal, and can also be exercised in front of a domestic Court acting as an international Court and taking decisions on the basis of international law (theory of the 'dédoulement fonctionnel' of municipal tribunals); see in the same line Brownlie, *Principles*, at 580.

(35) See Barberis and Eustathiades, *supra* n. 32.

(36) Daes (Special Rapporteur), *Study on the Status of the Individual and Contemporary International Law, Promotion, Protection and restoration of Human Rights at National, Regional and International Levels*, UN Center for Human Rights, Study Series No 4, (UN Publications, 1992), Para. 489; Guggenheim, *Traité de droit international public*, Tome I (Librairie de l'Université, Georg & Cie, 1953) Chap. IV; Menon, *supra* n. 29, at 98. Like Verdross and Scelle, Guggenheim subscribes to the

indeed the capacity to assume an active position in international relations and take part in the law-creating process⁽³⁷⁾, are also necessary. It is widely recognised that the attributes of the subject of law in any legal system need not necessarily be «identical in their nature or in the extent of their rights», and that «their nature depends upon the needs of the community; an international person needs not possess all the international rights, duties and powers normally possessed by states»⁽³⁸⁾. Still, the undisputed instances where international personality is recognised for individuals are limited, in the light of their procedural handicap⁽³⁹⁾.

No consensus exists either regarding the international legal qualification of non-state actors that would duly reflect their political role on the international stage. The most radical approach, reducing individuals to mere objects of international law⁽⁴⁰⁾, has now been abandoned for 'intermediate' qualifications such as 'destinataires' (recipients) of international law⁽⁴¹⁾, beneficiaries⁽⁴²⁾, 'sujets médiats/dérivés'⁽⁴³⁾, 'sujets artificiels'⁽⁴⁴⁾, or material subjects⁽⁴⁵⁾. Some authors dismiss the qualification of subject of

argument that procedural capacity can be exercised in front of a domestic court acting as an international court. See also Ross, *A Textbook of International Law*, General Part (Longmans, Green & Co., 1947), § 2; Ross however denies that individuals can ever be capable of an international obligation, hence dismissing individuals as potential subjects of international law. See also Nørgaard, *The Position of the Individual in International Law* (Munksgaard, 1962); strongly inspired by Ross' theory, Nørgaard admits nonetheless that individuals held the position of subjects of international law in a limited number of cases, and notes that «as the international legal order has increasingly developed from a primitive to a more advanced stage, the closer the contact has grown between international law and the individual»; Nørgaard, *supra*, at 310.

(37) Mosler, 'Subjects in International Law', in Bernhardt (ed.), *Encyclopedia of Public International Law*, Instal. 7 (North-Holland, 1984), 442, at 443; Partsch, *supra* n. 29, at 317. See also Menon, *supra* n. 29, at 121; Leary's remarks in ASIL, 'Are Indigenous Populations Entitled to International Juridical Personality?', 77 *ASIL Proc.* (1985), 189, at 194.

(38) *Oppenheim's International Law*, § 33; in the same sense, see Mosler and Menon, *supra* n. 37.

(39) For a detailed review of the instances where individuals have held (and sometimes still hold) the position of subject of international law, see Dominicé, 'L'émergence de l'individu en droit international public', 16 *Annales d'études internationales* (1987-88), 1; Menon, *supra* n. 37, at 135 *et sequ.*; *Quoc Dinh: Droit International Public*, §§ 425 *et sequ.*; Nørgaard, *supra* n. 36; *Oppenheim's International Law*, Vol. 1, at § 375, n. 1 and 2.

(40) The object theory is often attributed to Helborn, *Das System des Völkerrechts* (1986); quoted after Manner, 'The Object Theory of the Individual in International Law', 46 *AJIL* (1952), 428; see also Redslob, *Traité de droit des gens*, (Sirey, 1950), 71; Schwarzenberger & Brown, *A Manual of International Law*, 6th edn (Stevens & Sons, 1976), Chap. 3.

(41) Barberis, *supra* n. 32, at 181 *et sequ.*; Dominicé, n. 39; Guggenheim, *ibid. supra* n. 36; Kelsen, 'Théorie générale du droit international public: problèmes choisis', 42 *RdC* (1932-IV), 118, at 141 *et sequ.*; Virally, 'Panorama du Droit International Contemporain, Cours Général de Droit International', 183 *RdC* (1983-III), 9, at 133 *et sequ.*

(42) O'Connell, *International Law*, 2nd edn, Vol. 1, (Stevens & Sons, 1970), at 107 *et sequ.*

(43) *Quoc Dinh: Droit International Public*, §424.

(44) Rousseau, *Droit international public* Tome II (Sirey, 1974), 692 *et sequ.*

international law altogether, and count individuals among the various categories of 'participants' of international law⁽⁴⁶⁾.

By focusing on the formal status of the individual (and non-state actors in general) in international law, the on-going scholarly debate has remained essentially rhetorical. It is difficult to identify in the numerous writings discussing the status of individuals in international law, (a) how the recognition of a full or functional international personality to individuals would bring any concrete advantages to these new subjects, and (b) whether these concrete advantages are contingent upon the recognition of the quality of subjects of international law, or whether they could be gained otherwise.

Clearly, the question of the factual role and positions of individuals and non-state actors in international law is not reduced to that of international personality; international personality is neither necessary, nor sufficient to secure due consideration of the needs and interests of non-state entities, including individuals, in the negotiation and implementation of international rules which affect them directly or indirectly. On the other hand, the recognition of certain prerogatives at the supranational level associated with even a limited capacity for individuals to avail themselves of these prerogatives constitutes a worthy tool to include individual environmental concerns in inter-state environmental policy and law. The use of human rights procedures is a perfect illustration thereof.

3. Towards a More Holistic Approach to International Environmental Law: the Environment-Human Rights Law Dimension

More than a reflection of a fundamental breakthrough in the old debate on the international legal personality in relation to non-state actors, the multiplication of 'public participation', 'individual/group rights and interests' clauses in international environmental instruments should be attributed to a two-fold evolution of international environmental law:

- (1) The reorientation and broadening of the scope of 'modern' international environmental law. The original inter-state nature of international environmental law reflected in fact the primarily inter-state nature of the issues it addressed, such as

(45) Whose interests determine the content of the law; as opposed to formal subjects; Sperduti, 'L'individu et le droit international', 90 *RdC* (1956-II), 727.

(46) Namely States, international organisations, multinational corporations, and NGOs; Higgins, 'Conceptual Thinking about the Individual in International Law' 24 *New York School LR* (1978), 11; also *Problems and Process: International Law and How to Use it* (Clarendon, 1994), Chap. 3. Higgins bases her theory on the premise that international law is not inter-state in essence, but its inter-state character and related structure is the product of States' decision, which can be modified by a decision of States. Lauterpacht seemed also in favour the qualification of participant, albeit not to a degree similar to Higgins; Lauterpacht, *International Law*, Vol. I (Cambridge University Press, 1970), Title II, at 287.

transboundary pollution or equitable utilisation of shared, or common resources⁽⁴⁷⁾. The progressive 'intrusion' of international environmental law in the domestic sphere⁽⁴⁸⁾ has led not only to the enlargement of the circle of States having a legitimate concern in *prima facie* domestic issues⁽⁴⁹⁾; it has also broadened the circle of the parties having a legitimate interest in the formulation of international law and legitimate expectation in its implementation, to encompass non-state entities in general, and more particularly individual human beings⁽⁵⁰⁾. Obviously, the progressive development of international concern for specific environmental issues does not eclipse, exclude or otherwise undermine the concern of individuals and other non-state entities for these issues; on the contrary, it enhances it.

- (2) The adoption of a more integrated perspective on environmental matters, as a result of the recognition of the inter-relatedness of economic, social and environmental issues⁽⁵¹⁾. The protection and preservation of the environment is no longer

(47) Boyle, 'The Role of International Human Rights Law in the Protection of the Environment', in Boyle & Anderson (eds.), *Human Rights Approaches to Environmental Protection* (Clarendon, 1996) (hereafter Boyle & Anderson), Chap. 3, at 54; this original nature of environmental law, *inter alia* as a law of allocation of natural resources, is particularly clearly reflected *supra* throughout Chap. 2. Permanent Sovereignty over Natural Resources and Chap. 3, Precautionary Principle.

(48) See *supra* Chap. 2/2/iii. Sovereignty over Environmental Resources and Environmental Policies versus of Globalisation of Environmental Standards and Policies; Chap. 5/1, Introduction.

(49) A parallel can be drawn with the progressive erosion of the reserved domain of domestic jurisdiction under Art. 2(7) of the 1945 UN Charter with respect of the protection of basic human rights, now considered as an issue of 'legitimate concern of the international community' (1993 Vienna Declaration and Programme of Action on Human Rights, Para. 4) or 'the concern and interest of all States' (*Barcelona Traction, Light and Power Company, Limited, Judgment, ICJ Rep. 1970, 3, Paras. 33 & 34*); Cançado Trindade, 'The Parallel Evolutions of International Human Rights Protection and of Environmental Protection, and the Absence of Restrictions upon the Exercise of Recognized Human Rights', 13 *Revista del Instituto Interamericano de Derechos Humanos* (1991), 35; Sands, *Principles* (Vol. I), 220. On the emergence and evolution of international human rights law, see excellent synthesis by Sohn, 'The New International Law: Protection of the Rights of Individuals Rather than States', 32 *American University LR* (1982), 1, and for further references, Harris, *Cases & Materials*, Chap. 9; *Oppenheim's International Law*, Vol. 1, at § 431. On the position of individuals with respect to international human rights, see more particularly Daes, *Study on the Status of the Individual and Contemporary International Law, Promotion, Protection and Restoration of Human Rights at National, Regional and International Levels* (UN Publications, 1992); Mullerson, 'Human Rights and the Individual as Subject in International Law, A Soviet View', 1 *EJIL* (1990), 33. In a very interesting immigration case, the High Court of Australia found that «Australia's accession to the United Nations Convention on the Rights of the Child (The Convention) had given rise to a *legitimate expectation* in the respondent's children that the respondent's application for resident status would be treated in accordance with the terms of the convention»; *Minister for Immigration and Ethnic Affairs v. Teoh*, [1995] 128 Australian Law Reports 353, at 353 (emphasis added).

(50) Grossman & Bradlow, 'Are We Being Propelled Towards a People-Centred Transnational Legal Order?', 9 *American University JIL & Policy* (1993), 1, at 15; see *supra* n. 13 and 20, on the contribution of NGOs in particular.

(51) The problems of poverty, overpopulation and urbanisation are rather obvious illustration of primarily social issues having an 'environmental' dimension. It will be later argued that the same can be said about the advancement of women and their integration into the economic development process; *infra* 4. Women Participation and Women Interests Clauses in Environmental Documents: Desirable or

perceived in isolation, but as interrelated with other issues addressed by other branches of international law, and most notably international trade⁽⁵²⁾, economic development⁽⁵³⁾, and human welfare and social development⁽⁵⁴⁾. Sustainable development represents in many respects the 'culmination' of the shift away from a 'single sector' or 'fragmentary approach' towards a more 'holistic approach'⁽⁵⁵⁾, and provides for a global perspective on environmental, social and economic issues⁽⁵⁶⁾. International environmental law has thus become increasingly concerned with peoples' welfare and interests as a result of linkage with international human rights law, in the same way as it has become more closely associated to developmental issues as a result of its connection with developmental law. Likewise, there is a tendency to express environmental concerns and environmental values in development or human rights law instruments.

Regrettable Evolution?

(52) On the use of trade to enforce environmental regulation, see *supra* Chap. 2/2/iii. Sovereignty over Environmental Resources and Environmental Policies versus of Globalisation of Environmental Standards and Policies.

(53) On the 'global bargain' strategy, and the linking of environmental and developmental issues to provide some incentive to developing States to protect their environment, and to industrialised States to transfer funds and technologies, see *supra* Chap. 5/2/iv. Common Concern, Common Interest of Mankind: Global Partnership or Global Bargain?, and Chap. 5/4. The Terms of the Bargain Principle of Partnership. The linking of development and human rights predated the linking of environment and development, and was more particularly illustrated by the human development paradigm, and later the various attempts to obtain recognition of a (human) right to development; *supra* n. 1 and references contained therein. In a report on the *Question of the Realisation of the Right to Development*, E/CN.4/1990/Rev.1, 26 September 1990, UN Secretary General reiterated that «a development strategy that disregards or interferes with human rights is the very negation of development»; §145. The Secretary General repeatedly stressed the 'non dissociability' of human rights in general in his periodical reports on the right to development; see for instance E/CN.4/1334 at 63 *et sequ.*, and E/CN.4/1421, Para. 25(b); further reference on the right to development *supra* Chap. 5, Principle of Partnership, n. 131 *et sequ.* (CR).

(54) Cançado Trindade, 'Relations Between Sustainable Development and Economic, Social and Cultural Rights: Recent Developments', in Al-Nauimi & Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, 1995), 1051.

(55) Cameron, 'Future Directions in International Environmental Law: Precaution, Integration and Non-state Actors', Paper presented at the Read Memorial Lecture for 1995, 19 *Dalhousie LJ* (1996), 122, at 132. On the originally sectorial approach of international environmental law, see for instance Kiss, 'The International Protection of the Environment', in Macdonald & Johnston (eds.), *The Structure and Process of International Law: Essays in Legal Philosophy, Doctrine and Theory* (Martinus Nijhoff, 1986), 1069, at 1070 *et sequ.*, and references *supra* Chap. 1/3/iii. Sustainable Development.

(56) See McGoldrick's thesis on the 'pillared, temple-like structure' of sustainable development, inspired by EU law, and reminiscent, in some respect, of the so-called three CSCE/OSCE's baskets (although in that case, the last 'basket' relates to disarmament rather than environment); 'Sustainable Development and Human Rights: An Integrated Conception', 45 *ICLQ* (1996), 796. Hence for instance, the WCED Report links, albeit not always in a coherent way, various contemporary problems such as international economy, world resources, population, food security, urbanisation, industrialisation, energy and peace.

The various references to human rights⁽⁵⁷⁾, to a right to an adequate environment⁽⁵⁸⁾, and to major groups, including women⁽⁵⁹⁾, in international environmental instruments or documents, and to the environment in human rights instruments⁽⁶⁰⁾ or documents otherwise concerned with human rights⁽⁶¹⁾ and social development⁽⁶²⁾ are clear illustrations of such trend.

(57) See the numerous reference to human rights in 1992 Agenda 21; see reference to human rights abuses, 25.8; right to the protection of the law, 8.18; individual rights, 2.32; human rights and freedom, 26.1; people's right to subsistence, Paras. 17.82; housing rights, 7.6; right of access to resources, 40.8; land rights (and associated duties), 14.18(c); 32.6(d) and 32.14(a); 14.16; property rights, 10.5, 12.28(c), 14.9(c); 24.2(f); women human and civil rights, 3.2, 5.17, 5.48(a), 14.18(b); 24.4, 29.7; rights related to family planning, 3.8(j), 5.50, 6.25, 24.2(g); workers' rights, 29.4; farmers' rights, 14.60(a); children's rights, 25.14; rights of indigenous populations, 3.7, 10.5, 26.2, 26.4(a), 26.8, 36.5; rights and responsibilities of NGOs, 27.10(a), 27.13; rights of small-scale fish workers and local communities, 18.81(b). By contrast, the rights (and obligations) of States are only referred seven occasions; see 17.1, 17.44, 17.47, 17.49, 17.69, 17.75, and 39.5.

The close interrelation between human rights and the environment was also particularly illustrated with the qualification of the Sardar Sarovar project was qualified by the Independent Review as a *human right* violation, in addition of being environmentally non acceptable, because of the massive forcible resettlement of people generated by the project, in violation of ILO Convention 107, on Involuntary Resettlement and Rehabilitation, signed by India in 1985. See letter to the President of the World Bank, L.T. Preston, 18 June 1992, in Morse (Chairman) & Berger (Deputy Chairman), *Sardar Sarovar, the Report of the Independent Review*, (Resource Futures International, 1992), XX and XXV.

(58) The 1972 Stockholm Declaration on the Human Environment already acknowledged the essential importance of both the natural and man-made environment to the enjoyment of basic human rights (preambular Para. 2) and stated that man has the «fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well being...»; Princ. 1. Although the need to ensure a healthy environment for the well-being of individuals was recognised by the General Assembly in Res. A/45/94, 14 December 1990, on the Need to Ensure a Healthy Environment for the Well-Being of Individuals, the human rights terminology was cautiously avoided both in that Resolution and in the 1992 Rio Declaration on Environment and Development, which provide, in similar terms, that human beings are «entitled to a healthy and productive life in harmony with nature»; 1992 Rio Declaration, Princ. 1; for a brief review of reasons behind such cautious wording, see Shelton, 'What Happened in Rio to Human Rights?', 3 *YbIEL* (1992), 75, at 89 *et sequ.*; Pallemarts, 'La Conférence de Rio: Grandeur ou décadence du droit international de l'environnement?', 28 *RBDI* (1995), 175, at 129 *et sequ.* See also 1989 Hague Declaration on the Environment, Para. 5; 1991 ECE Draft Charter on Environmental Rights and Obligations, Princ. 1. Both 1986 WCED-EG Legal Principles for Environmental Protection and Development and 1995 IUCN Draft International Covenant on Environment and Development advocate a right to an *adequate* level of environment; respectively Art. 1 and Art. 12(1), although WCED-EG recognised that such right remains an 'ideal which must still be realized'; see Experts Group on Environmental Law of the World Commission on Environment and Development, *Environmental Protection and Sustainable Development* (Graham & Trotman/Nijhoff, 1987), at 42.

(59) *Supra* n. 8 and 9.

(60) The right to environment is only exceptionally referred to as a human right on its own; see 1981 African Charter on Human and Peoples' Rights, Art. 24; 1988 Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights, Art. 11. See also Draft United Nations Declaration on the Rights of Indigenous Peoples, Art. 28; the Draft was adopted by the UN Sub-Commission on Prevention of Discrimination and Protection of Minorities in 1994, and was considered by a Working Group of the Commission on Human Rights in late 1995 and again in late 1996, without any substantial progress being made. At the time of writing, the declaration is still a draft; informal discussion with Prof. D.J. Harris, Nottingham University, 28 August 1997. See also Draft Inter-American Declaration on the Rights of Indigenous Peoples, Art. 13(3), which states indigenous peoples' right to 'conserve, restore and protect their environment, and the productive capacity of their lands,

The adoption of a more integrated approach to contemporaneous problems, however, does not meet the unanimous support of the doctrine, and some authors harbour certain reservations about the legal aspects of these new 'linkages'⁽⁶³⁾. The most serious issue

territories and resources'; the first draft was adopted by the Inter-American Commission on Human Rights in September 1995, and the latest revised version in February 1997. The 1997 Draft is posted on the Commission's Website @ <<http://www.oas.org/EN/PROG/indigene.htm>>; see further Hannum, 'The Protection of Indigenous Rights in the Inter-American System', in Harris & Livingstone (eds.), *The Inter-American Human Rights System* (Oxford University Press, forthcoming), Chap. 7. The 1989 ILO Convention on Indigenous Peoples, whilst short of recognising a clean environment as right, provides that measures must be taken for safeguarding *inter alia* the environment of the peoples concerned; Art. 4(1). More often however, references to the environment are made in relation to, or inferred from, provisions on health (1961 European Social Charter, and 1996 European Social Charter (revised), Art. 11; 1966 International Covenant on Economic, Social and Cultural Rights, Art. 12(1) and (2)(b); 1989 Convention on the Rights of the Child, Art. 24(2)(c)), to the general welfare of individuals (1966 International Covenant on Economic, Social and Cultural Rights, Art. 4) and to appropriate standards of living (1966 International Covenant on Economic, Social and Cultural Rights, Art. 11(1)) and safe and healthy working conditions (1996 European Social Charter (revised), Art. 3).

The right to environment is also enshrined in the Constitutions of an increasing number of States, and indeed the majority of State Constitutions adopted since the mid 1970s recognise such right, the latest example being the 1994 South African Constitution; Glazewski, 'Environmental Rights and the new South African Constitution', in Boyle & Anderson, Chap. 9. See reproduction of a number of constitutional provisions on environmental rights and duties in Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity* (United Nations University Press/Transnational Publisher, 1989), Appendix B. The utility of the various constitutional provisions varies however, from purely formal and 'toothless' guarantee in some countries, to effective tool to protect environmental interests in others; for a comparative review of the impact of such right in Germany, Switzerland, the Netherlands, Greece, Spain, Portugal, Turkey and Brazil, see Brandl & Bungert, 'Constitutional Entrenchment of Environmental Protection: A Comparative Analysis of Experiences Abroad', 16 *Harvard ELR* (1992), 1; and more generally Dolzer, 'Individual Freedom and Environmental Protection', in Bothe (ed.), *Trends in Environmental Policy and Law* (IUCN, 1980), 29. More specially on the meaning of the environmental rights enshrined in some US States constitutions, see Fernandez, 'State Constitutions, Environmental Rights Provisions and the Doctrine of Self-Execution: A Political Question?', 17 *Harvard ELR* (1993), 333, at 136 *et sequ.* For an analysis of international human rights, and constitutional provisions relevant to the protection of environmental interest, see Ksentini's *Human Rights and the Environment: Preliminary Report* (1991), *Progress Report* (1992), and *Second Progress Report* (1993), referred to *infra* n. 61.

(61) See most notably the series of reports commissioned by Sub-Commission on the Prevention of Discrimination and Protection of Minorities, on the relationship between human rights and the environment; Ksentini, Special Rapporteur for the Sub-Commission on the Prevention of Discrimination and Protection of Minorities; *Human Rights and the Environment: Preliminary Report*, UN Doc.E/CN.4/Sub.2/1991/8, 2 August 1991; *Human Rights and the Environment: Progress Report*, UN Doc.E/CN.4/Sub.2/1992/7, 2 July 1992; *Human Rights and the Environment: Second Progress Report*, UN Doc.E/CN.4/Sub.2/1993/7, 26 July 1993; *Human Rights and the Environment: Final Report*, UN Doc.E/CN.4/Sub.2/1994/9, 6 July 1994. The possibility of an internationally recognised human right to a healthy environment was outlined in Ksentini's *Preliminary Report* (1991), Para. 8. For a brief discussion of the competence of the Sub-Commission on the Prevention of Discrimination and Protection of Minorities on environment-related issue, see Thorne, 'Establishing Environment as a Human Right', 19 *Denver JILP* (1991), 301, at 305 *et sequ.*; for a short account of the Ksentini Reports, see Fabra Aguilar & Popovic, 'Lawmaking in the United Nations: The UN Study on Human Rights and the Environment', 3 *RECIEL* (1994), 197.

(62) See *inter alia* 1995 Beijing Platform for Action for the Advancement of Women, Chap. III, *inter alia* Sect. K; 1995 Copenhagen Programme for Social Development, Chap. 1, *inter alia* Para. 8 *in fine*.

(63) See for instance Sieghart, 'Economic Development, Human Rights and the Omelette Thesis', 1 *Denver Policy Review* (1983), 1.

in that respect relates to the risk of broadening the mandate of the institutions in charge of the one or the other dimension as a direct result of such link. To the one extreme, a holistic approach might entail risks of unnecessary overlapping mandates and actions; to the other extreme, too strict a interconnection of the issues might in fact paralyse any action, due to the difficulty in satisfying, in the same time, economic, environmental and human requirements. Shihata for instance, considering the linkage from a perspective of international funding agencies, reminds us that despite the factual link between economic development, human rights and environment, «all international organizations have to act within the limitations of their respective constituent instruments»⁽⁶⁴⁾. Shihata's remark is more directly concerned with the World Bank and the debated issue of the adverse environmental and social impacts of its lending policy. Whilst the World Bank has now adopted a more 'human and environmentally sound' lending policy⁽⁶⁵⁾, it has long argued (and still does) that its Articles of Agreement precluded it from grounding its lending policy on non economic considerations; Art. IV, §10 states as follows:

«The Bank (...) shall not be influenced in [its] decisions by the political character of the member or members, concerned. Only economic considerations shall be relevant to [its] decisions (...)»⁽⁶⁶⁾.

The World Bank reviewed its lending policy in late 1985, after its particularly controversial decision to fund the Sardar Sarovar irrigation projects, on the Narmada River, India, against the recommendation a Committee of Independents Experts commissioned by the Bank itself⁽⁶⁷⁾. The recent decision of the Bank to decline China's application for financial assistance in relation to the no less controversial US \$ 20 billion Three Georges Dam project, on the Yangtze River, constitutes a first step towards a more holistic approach to economic development as related to environment and human welfare⁽⁶⁸⁾.

(64) ASIL, 'Environment, Economic Development and Human Rights: A Triangular Relationship?', 82 *ASIL Proc.* (1988), 40, at 42.

(65) See *supra* Chap. 3/4/iii. Prior Environmental Impact Assessment.

(66) See further Shihata, 'The World Bank and Human Rights: An Analysis of the Legal Issues and Record of Achievements', 17 *Denver JIL* (1988), 39.

(67) *Supra* n. 57. See the Bank's self-criticism: World Bank Information Center (ed.), *Funding Ecological and Social Destruction: The World Bank and International Monetary Fund* (World Bank, 1989). See also Esteva & Prakash, 'Grassroots Resistance to Sustainable Development: Lessons from the Banks of the Narmada', 22 *The Ecologist* (1992), 45; Huyser, 'Sustainable Development: Rhetoric and Reform at the World Bank', 4 *Transnational Law & Contemporary Problems* (1994), 253; McAllister, 'The United Nations Conference on Environment and Development: An Opportunity to Forge a New Unity in the World of the World Bank Among Human Rights, the Environment, and Sustainable Development', 16 *Hastings ICLR* (1993), 689.

(68) The Three Georges Dam project has been widely criticised for its enormous and poorly assessed social and environmental impacts: 1.13 billion of people displaced, and 632,000 square kilometres of land immersed (by comparison, the Sardar Sarovar entailed 'only' the displacement of 200,000 persons,

Regardless of individuals' formal status in international law, a more holistic approach to environmental issues, and most importantly the integration of environmental values in human rights instruments and of human rights values in environmental law instruments, provides individuals with certain means to have their own environmental or non environmental interests duly considered and respected *via* the existing channels of human rights law⁽⁶⁹⁾.

A clear distinction needs to be drawn at this stage, between (a) the increasing use of human rights to preserve the environmental interests of individual human beings against unsustainable measures and policies, and (b) the more controversial recognition of a new (collective) human right to a clean and safe environment⁽⁷⁰⁾.

i. Use of Human Rights Procedures to Preserve Individual Environmental Interests

With most of the 'general' human rights documents drafted before the 1970s, when environmental issues were still low, on international, regional and national agendas, it is not surprising that the 'classic' human rights documents do not expressly contemplate such values as possible objects of protection⁽⁷¹⁾. A limited range of environmental

and the flooding of 1,000 square kilometres of lands). Serious reservations have also been expressed with regard to the necessity, and indeed the viability of the dam (a) in a seismic region, and (b) in the light of high concentration of silt carried by the Yangtze water; see Kwai-cheong, 'The Three Georges Project of China: Resettlement Prospects and Problems', 24 *Ambio* (1995), 98; Sullivan, 'The Three Georges Dam Project: The Need for a Comprehensive Assessment', 8 *Georgetown IELR* (1995), 109. A private study made by the Swiss firm Metron Bern AG, in 1996, shows that the energy desperately needed by China to meeting soaring needs of the population could be provided *via* the development of alternative and renewable sources of energy at a cost of FRS 30 millions; Metron Bern AG, *Alternativen des Bundes zu wahrscheinlichen Abschreibungen der ERG*, 14 November 1996. We are indebted to Mr T. Pellet, Permanent Secretary of the Swiss NGO *Erklärung von Bern* for providing us with a copy of the above report.

(69) It was even suggested that the procedures and mechanisms developed for the protection of human rights could constitute a valuable precedent and serve as a model in the area of the protection of the environment; see Cançado Trindade, 'Environmental Protection and the Absence of Restrictions on Human Rights', in Mahoney & Mahoney, *Human Rights in the Twenty-first Century, A Global Challenge* (Martinus Nijhoff, 1993), 561, at 586.

(70) A similar bi-dimensional approach is implicitly endorsed by Sands, *Principles* (Vol. I), 224 *et sequ.*, and Boyle, *supra* n. 47. Boyle refers to the first category of rights as environmental rights.

(71) See most notably 1948 Universal Declaration of Human Rights; 1948 American Declaration of Rights and Duties of Man; 1950 European Convention on Human Rights, and Protocols 1 and 4 securing certain Rights and Freedoms other than those included in the Convention; 1961 European Social Charter; 1966 International Covenants on Economic, Social and Cultural Rights, and Civil and Political Rights; 1969 American Convention on Human Rights. See also Declaration on the Aims and Purposes of the International Labour Organization, adopted by the International Labour Conference at its Twenty-sixth Session, Philadelphia, in April-May 1944, and later incorporated in the 1946 ILO constitutive Charter, Philadelphia declaration provides that individuals have the right «to pursue both their material well-being and their spiritual development in conditions of freedom and dignity, of economic security and equal opportunity»; Principle II(a).

Various attempts failed in the 1970s and early 1980s to have the right to a natural environment 'favourable to human health' enshrined in an additional Protocol to the Convention; see Dupuy, 'Le Droit

values have been subsequently read into various 'classic' substantive human rights provisions by the institutions in charge with implementing or supervising the implementation of the various human rights instruments inasmuch as they were necessary to a reasonable enjoyment of those rights⁽⁷²⁾. The rights to the peaceful enjoyment of privacy and home⁽⁷³⁾, and private property⁽⁷⁴⁾ have been the most commonly raised, in relation to noise pollution⁽⁷⁵⁾, fumes⁽⁷⁶⁾ and to the environmental

à la santé et la protection de l'environnement', in Dupuy (ed.), *The Right to Health as a Human Right*, Hague Academy of International Law Workshop 1978 (Sijthoff & Noordhoff, 1979), 340, at 407 *et sequ.*; Steiger (Rapporteur), *The Right to a Human Environment: Proposal for an Additional Protocol to the European Human Rights Convention* (Erich Schmidt Verlag, 1973). The ECHR Commission explicitly ruled out on three separate occasions that a right to the preservation of nature was protected as such or in relation to other provisions of the Convention; see *Dr S. v. FRG*, Applic. 715/60, 5 August 1960 (unpublished); quoted after Déjeant-Pons, 'Le droit de l'homme à l'environnement, droit fondamental au niveau européen dans le cadre du Conseil de l'Europe, et la Convention européenne de sauvegarde des droits de l'homme et des libertés fondamentales', *Revue Juridique de l'Environnement* (1994-4), 373, at 375; *X & Y v. FRG*, Applic. 7407/76, 5 D&R (1976), 161; *Assoc. X v. UK*, Applic. 7154/75, 14 D&R (1979), 31. The issue of the recognition of a right to an environment conducive to good health, well-being and full development of human personality was considered again in 1990, and even enshrined in a Recommendation of the Parliamentary Assembly of the Council of Europe; Recommend. 1130 (1990) (1), on the Formulation of a European Charter and European Convention on Environmental Protection and Sustainable Development, 28 September 1990, reprinted in 1 *YbIEL* (1990), 484. There is still no report of any action of the Committee of Ministers taken on the recommendation. A major step was also taken with the Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, prepared by the Council of Europe and concluded at Lugano on June 21, 1993; on which see Bowman, 'The Convention on Civil Liability for Damages Resulting from Activities Dangerous to the Environment', 2 *Environmental Liability* (1994), 11.

(72) For a concise review of the environment-related case-law under human rights procedures, see Churchill, 'Environmental Rights in Existing Human Rights Treaties', in Boyle & Anderson, Chap. 5; Shelton, 'Human Rights, Environmental Rights, and the Right to the Environment', 38 *Stanford JIL* (1991), 103; Sands, *Principles* (Vol. I), at 224 *et sequ.*; more particularly on environmental values in the ECHR context: Déjeant-Pons, 'Le droit de l'homme à l'environnement, droit fondamental au niveau européen dans le cadre du Conseil de l'Europe, et la Convention européenne de sauvegarde des droits de l'homme et des libertés fondamentales', *Revue Juridique de l'Environnement* (1994-4), 373, at 416 *et sequ.*; Desagné, 'Integrating Environmental Values into the European Convention on Human Rights', 89 *AJIL* (1995), 263; Kley-Struller, 'Der Schutz der Umwelt durch die Europäische Menschenrechtskonvention', 22 *Europäische Grundrechte Zeitschrift* (1995), 507; Sands, 'Human Rights, Environment and the *Lopez-Ostra* case: Context and Consequences', 6 *EHRLR* (1996), 597, at 607. For a brief account of domestic environment-related cases in Latin America, see Aguilar, 'Enforcing the Right to a Healthy Environment in Latin America', 3 *RECIEL* (1994), 215.

(73) 1948 Universal Declaration on Human Rights, Art. 12; 1966 International Covenant on Civil and Political Rights, Art. 17; 1950 European Convention on Human Rights, Art. 8(1); 1969 American Convention on Human Rights, Art. 11.

(74) 1948 Universal Declaration on Human Rights, Art. 17; 1950 European Convention on Human Rights, First Protocol, Art. 1; 1969 American Convention on Human Rights, Art. 21; 1981 African Charter on Human and Peoples' Rights, Art. 14.

(75) See ECHR Commission's decisions in *E.A. Arrondelle v. UK*, Applic. 7889/77, 19 D&R (1980), 186 (admissibility), and 26 D&R (1982), 5 (friendly settlement); *Briggs v. UK*, Applic. 9310/81, 44 D&R (1985), 13 (admissibility) and 52 D&R (1987), 29 (friendly settlement). In both cases, the Commission held that the noise generated by Gatwick Airport resulted in 'intolerable stress thereby affecting the right to privacy'. The Commission denied however that military shooting ranges used net time over week days amounted to such violation; *Vearncombe et al. v. UK and FRG*, Applic. 1281/87, 59 D&R (1989), 186. Following the same approach, the ECHR Court upheld that the noise disturbances from an airport (in that case Heathrow) can amount to an interference with the right to privacy and family

impact of energy-related projects⁽⁷⁷⁾. The right to life⁽⁷⁸⁾ was invoked in the context of radioactive wastes⁽⁷⁹⁾ and nuclear tests⁽⁸⁰⁾, nuclear energy⁽⁸¹⁾ and in relation to the

life, but considered nonetheless that, in the specific circumstances of the case, a fair balance had been struck between individual and common interest, and that the infringement to the individual right was therefore proportionate to the common interest; *Powell & Rayner v. UK*, Ser. A, No. 172 (1990).

(76) See ECHR Court's judgement in *Lopez Ostra v. Spain*, Ser. A, No 303-C (1995); on which see Sands, 'Human Rights, Environment and the *Lopez-Ostra* Case: Context and Consequences', 6 *EHRLR* (1996), 597.

(77) See ECHR Commission's decisions in *G. & E. v. Norway*, Joined Applic. 9278/81 and 9415/81, 35 *D&R* (1984), 30, concerning the flooding of grazing lands as a result of the realisation of an hydroelectric project; *S. v. France*, Applic. 13728/88, 65 *D&R* (1990), 250, concerning the nuisance related to the exploitation of a nuclear power station, and the first decision of the Commission related to pollution other than noise. Weber stresses that the Commission in the latter case did not make a difference between actual and potential environmental harm, hereby implying that both environmental harm and environmental risk may constitute an interference under the European Convention on Human Rights, providing that the potential human right violation meets the criteria of foreseeability and seriousness set forth by the Court in the *Soerings v. UK*, Ser.A, No 161, Para. 90. See Weber, 'Environmental Information and the European Convention on Human Rights', 12 *HRLJ* (1991), 177, at 181.

(78) 1948 Universal Declaration on Human Rights, Art. 3; 1966 International Covenant on Civil and Political Rights, Art. 6(1); 1950 European Convention on Human Rights, Art. 12; 1969 American Convention on Human Rights, Art. 4; 1981 African Charter on Human and Peoples' Rights, Art. 4.

(79) See UN Human Rights Committee's decision in *Port Hope Environmental Group v. Canada*, Communic. No. 67/1980, reprinted in *Selected Decisions of the Human Rights Committee*, Vol. 2 (Seventeenth to Thirty-second sessions), 20; although the Committee recognised that the storage of radioactive wastes raises serious issues under the duty of States to protect life, it dismissed it on the grounds of non-exhaustion of domestic remedies.

(80) An early attempt was made in 1960, to have is reported to have nuclear tests and disposal of radioactive wastes at sea declared contrary to the right to life and environment under the European Convention on Human Rights; *Dr S. v. FRG*, Applic. 715/60, 5 August 1960 (unpublished). In that case, a medical doctor, relying on the studies of very prominent scientists and on detailed statistics, claimed that by dumping radioactive wastes in the North Sea, storing of atomic materials on German territory, and purchasing atomic armament, FRG violated his right to security and freedom (Art. 5) and the right to life and environment (Art. 2). ECHR Commission dismissed the case as manifestly ill-founded. A similar applications based *inter alia* on the right to health, life and healthy environment, were brought under EU law, 1966 ICCPR, and the European Convention on Human Rights, against the resuming of French nuclear testing in Mururoa in 1995; see EC Case T-219/95R, *Danielsson and Others v. European Commission*; [1995] *ECR* II-3052; *Bordes & Temeharo v. France*, Communic. No 645/1995, Human Rights Committee decision 39 July 1996, reproduced in 18 *HRLJ* (1997), 36; *Taura et al. v. France*, Applic. 28204/95, ECHR Commission 4 December 1995, 18 *Revue Universelle de Droits de l'Homme* (1996), 315. All three decisions were against the applicant(s), dismissed as manifestly ill-founded for lack of *locus standi* on the basis a strict interpretation of quality of victim. The Commission has recently rejected on similar ground an application based *inter alia* on inhuman and degrading treatment against nuclear testing conducted by the UK back in 1958 over Christmas Island; *McGinley & Egan v. UK*, Applic. 21825/93 and 23414/94, 28 November 1995, 21 *EHRR* (1996), *Commission Suppl.*, 56. Other applications in the same sense have been reported by Bothe, 'Challenging French Nuclear Tests: a Role for Legal Remedies?', 5 *RECIEL* (1996), 253; see also Decaux, 'Commission Européenne des droits de l'homme, décision du 4 décembre 1995 sur la recevabilité de la requête présentée par MM. Taura et al. contre France', 100 *RGDIP* (1996), 741; Dommen, 'Bordes & Temeharo c/France, Une tentative de faire protéger l'environnement par le Comité des droits de l'homme', *Revue Juridique de L'Environnement* (1997-2), 157.

(81) See *Greenpeace Schweiz et al. v. Switzerland*, Applic. 27644/95 to ECHR Commission concerning the health and environmental effects of a nuclear power plant on residents. The application was declared admissible for some of the applicants on 7 April 1997; reproduced in 18 *HRLJ* (1997), 164.

failure to take 'timely and effective measures' to prevent the irreparable deterioration of lands vital to the survival of indigenous peoples⁽⁸²⁾, or to curb toxic release from an industrial plant⁽⁸³⁾. The rights of minorities were relied upon in relation to the environmental impact of gas and oil exploitation⁽⁸⁴⁾. On the other hand human rights, in particular property rights⁽⁸⁵⁾, have also been used, albeit with a limited success only, to challenge the necessity and reasonableness of various environmental measures.

A number of environmental values can also be inferred from various economic and social rights⁽⁸⁶⁾. Such rights confer no immediate and directly enforceable individual prerogatives but require nonetheless «progressive realization in accordance with available resources, but in priority to other non-rights-based objectives»⁽⁸⁷⁾. The

(82) See Inter-American Commission on Human Rights' decision in *Yanomami Indians v. Brazil*, No. 7615, 5 March 1985, reprinted in *Inter-American Yearbook on Human Rights* (1985), 264. The Commission found that the Brazilian Government, by approving development in the Amazon region that threatened the life and culture of indigenous Indians, namely the construction of the Trans Amazonia highway, had acted in violation of the right to life, liberty and personal security, the right residence and movement, and the right to the preservation of health and well-being of the Amazonian Indians, and had disrupted their social unity and organisation. The decision was taken under the 1948 American Declaration of Rights and Duties of Man, as Brazil had not at the time ratified the American Convention on Human Rights; on that case see Hannum, 'The Protection of Indigenous Rights in the Inter-American System', in Harris & Livingstone (eds.), *The Inter-American Human Rights System* (Oxford University Press, forthcoming), Chap. 7, manuscript at 9 *et sequ.*; Davis, *Land Rights and Indigenous Peoples: The Role of the Inter-American Commission on Human Rights* (Cultural Survival, 1988), 41-62.

(83) *Anna Maria Guerra and 39 Others v. Italy*, Applic. 14967/89; the right to life argument was declared inadmissible by the ECHR Commission on the ground of non exhaustion of domestic remedies.

(84) See Human Rights Committee's decision in *Bernard Ominayak, Chief of the Lubicon Band v. Canada*, Communic. No. 167/1984, July 1987, (admissibility), and March 1990 (merits), reprinted in 11 *HRLJ* (1991), 305; see also Inter-American Commission on Human Rights in *Huaorani People v. Ecuador*, 1 June 1990, noted in 1 *YbIEL* (1990), 275, and commented in Fabra, 'Indigenous Peoples, Environmental Degradation, and Human Rights: A Case Study', in Boyle & Anderson, Chap. 12.

(85) The ECHR Court has consistently found so far that individual property right can be limited by an overriding environmental interest of the community at large; see *Fredin v. Sweden*, Ser. A, No. 192 (1991); *Oerlemans v. the Netherlands*, Ser. A, No. 219 (1991); *Pine Valley Developments et al. v. Ireland*, Ser. A, No. 222 (1991); *de Geouffre de la Pradelle v. France*, Ser. A, No. 253-B (1992). See also ECHR Commission in *Herrick v. UK*, Applic. 11185/84, 42 *D&R* (1985), 275; *N. v. Austria*, Applic. 10395/83, 48 *D&R* (1986), 65.

(86) See the brief review of the most relevant socio-economic rights in the context of environmental issues in Sands, *Principles* (Vol. I), 224-225; see further Churchill, 'Environmental Rights in Existing Human Rights Treaties', in Boyle & Anderson, Chap. 5, at 98 *et sequ.* The Committee of Experts of the European Social Charter expressed the (non-binding) opinion that the right to health (Art. 11) entails, *inter alia*, an obligation for the State to prevent environmental degradation that could have serious health effects, although it did not elaborate further on the concrete measures to be taken in that context, nor did it establish any minimum threshold of protection; see Handl, 'Human Rights and Protection of the Environment: A Mildly 'Revisionist' View', in Cançado Trindade (ed.), *Human Rights, Sustainable Development and the Environment*, Seminário de Brasília de 1992 (Instituto Interamericano de Derechos Humanos, Banco Interamericano de Desarrollo, 1995), 117, at 126.

(87) Boyle, *ibid. supra* n. 47, at 46; see also Goodwin-Gill, 'Obligations of Conduct and Result', in Alston & Tomasevski (eds.), *The Right to Food* (Stichting Studie-en Informatiecentrum Mensenrechten, 1984), 111. The US has consistently refused to consider economic and social rights as anything more than broad societal goals; Alston, 'US Ratification of the Covenant on Economic, Social and Cultural

mechanisms available to secure the proper implementation of social, cultural, and economic rights are essentially based on reporting procedures, hence offering individuals no opportunity to avail themselves directly of such rights at the supranational level⁽⁸⁸⁾. For this reason, social and economic rights are of less interest for the purpose of the present Chapter.

A first evaluation of the actual contribution of international human rights in protecting individual environmental interests remains extremely modest and in many respects disappointing. The modest number of cases⁽⁸⁹⁾ where a breach of human rights was found as a result of environmental nuisance might not be a sufficient criteria to evaluate fully the efficiency of human rights legal systems and procedures at protecting

Rights: The Need for an Entirely New Strategy', 84 *AJIL* (1990), 365, at 374. On the disputed human rights status of economic and social rights, see for instance Henkin, 'Economic-Social Rights as Rights', 2 *HRLJ* (1981), 223; van Hoof, 'The Legal Nature of Economic, Social and Cultural Rights: a Rebuttal of Some Traditional Views', in Alston & Tomasevski (eds.), *The Right to Food*, *ibid.*, 97.

(88) On the enforcement mechanism under the 1966 International Covenants on Economic, Social and Cultural Rights see Alston, 'The Committee on Economic, Social and Cultural Rights', in Alston (ed.), *The United Nations and Human Rights* (Clarendon, 1992), Chap. 12. Compare with the implementation mechanism under the 1966 International Covenant on Civil and Political Rights, combining reporting system (Art. 40), inter-State complaint system (Art. 41), and individual complaint system (1966 Optional Protocol); see Opsahl, 'The Human Rights Committee', in Alston (ed.), *The United Nations and Human Rights*, *ibid.*, Chap. 10.

The original supervision procedure under the 1961 European Social Charter, limited to the programmatic provisions set forth in the second Part of the Chapter to the exclusion of the human right formulated Articles of the first part, is also based on national reports (Arts. 21-21) to the exclusion of a right of individual or State petition. Provision is made however for (a) the comments of national employers organisations and trade unions on States reports directly to the Committee of Independent Experts in charge of the legal review of those reports (at the legal stage of the supervisory process), and (b) the consultation of NGOs by the Governmental Committee, at the political stage of the supervisory process. The latter opportunity has never been used however. The system would be seriously modified with the 1991 Protocol Amending the 1961 European Social Charter, which provides *inter alia* for an extended involvement of NGOs, and a system of collective complaints. The ratification of all parties to the 1961 European Social Charter is however necessary before the 1991 Protocol enters into force. The 1991 Protocol would also apply to the undertakings under the 1996 European Social Charter (revised), albeit only for the States having ratified the Protocol (Part. IV, Art. D.); the 1996 European Social Charter (revised) has not yet entered into force however. On the mechanism of implementation of the Social Charter, see Harris, *The European Social Charter* (University Press of Virginia, 1992), Chap. III; more particularly on the revision of the Charter, see Harris, 'A Fresh Impetus for the European Social Charter', 41 *ICLQ* (1992), 659. See however recent attempt to rely on the right to health to challenge the resuming of French Nuclear tests in Mururoa atolls, EC Case T-219/95R, *Danielsson and Others v. Commission*; *supra* n. 80; see also *Yanomami People v. Brazil*, and *Huaorani People v. Ecuador*, *supra* n. 82.

(89) Under the ECHR system, only one case of substantive human rights violation as a result of environmental interference was admitted by the Court; see *Lopez Ostra v. Spain*, *supra* n.76. Some other cases passed the stage of admissibility in the Commission, but ended up with friendly settlements; see *E.A. Arrondelle v. UK*; *Braggs v. UK*, *supra* n. 75. At the inter-American level, on the other hand, a human rights violation was found in both *Yanomami People v. Brazil* and *Huaorani People v. Ecuador*, *supra* n. 82. At the international level, a *prima facie* recognition of violation of human rights can be read in *Port Hope Environmental Group v. Canada*, *supra* n. 79.

environmental values⁽⁹⁰⁾; it indicates nonetheless their potential contribution thereto. Such modest contribution can be accounted for the following three major factors:

- 1) The limited number of applications in relation to environmental values under the various human rights mechanisms⁽⁹¹⁾.
- 2) The traditional reserve displayed by human rights bodies when it comes to considering highly subjective and relative values⁽⁹²⁾ and balancing subjective individual values with the more objective collective interest of the community at large⁽⁹³⁾. Environmental values are expressed in a generic way and hence *per definitionem* subjective therefore hardly susceptible of universal definition and evaluation⁽⁹⁴⁾. They are left to the broad margin of appreciation and balancing power of the States⁽⁹⁵⁾. This is particularly well summarised by Boyle as he writes:

(90) Due consideration should be paid to the cases having been resolved with a agreement of friendly settlements, or have been dismissed on procedural grounds.

(91) As Churchill rightly points out, African and Latin American Human Rights systems are still focused on more 'straightforward' human rights violations primarily related to basic civil and political rights. Besides, the 1988 Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights, so far signed by none of the two northern American States and ratified only by Ecuador, El Salvador, Peru, and Surinam, needs a further seven ratification before entry into force. Besides, the Protocol does not allow petition in front of the Inter-American Court for the violation of its provisions. And finally, the enforcement mechanism under the 1981 African Charter on Human and Peoples' Rights is notoriously weak; Churchill, 'Environmental Rights in Existing Human Rights Treaties', in Boyle & Anderson, Chap. 5, at 104 *et sequ.* See also Fabra, 'Indigenous Peoples, Environmental Degradation, and Human Rights: A Case Study', in Boyle & Anderson, Chap. 12, at 260; Gormley, 'The Legal Obligation of International Community to Guarantee a Pure and Decent Environment: The Expansion of Human Rights Norms', 3 *Georgetown IELR* (1990), 85. Various mechanisms exist in developed States, to ensure the protection of the environment independently from human rights; Churchill, *ibid.*, at 108.

(92) Whilst more technical rights, such as the right to a fair trial, or civic rights, are rather straightforward and allow for well-defined international standards, other rights, such as those related to morals or religion, are more specific to each State. Accordingly, whereas human rights institutions would apply strictly the more technical international standards, they tend to show considerable reserve with regard to the more 'relative' human rights, leaving it to States to appreciate the specific needs and interests of their own population; on the so-called margin of appreciation doctrine under the ECHR system, see Macdonald, 'The Margin of Appreciation', in Macdonald *et al.*(eds.), *European System for the Protection of Human Rights* (Kluwer Academic, 1993), Chap. 6; Harris *et al.*, *Law of the European Convention on Human Rights* (Butterworths, 1995), 12; Van Dijk & Van Hoof, *Theory and Practice of the European Convention on Human Rights*, 2nd edn.(Kluwer Law & Taxation, 1990), 583.

(93) Waldron, 'Can Communal Goods be Human Rights?', 28 *European Journal of Sociology* (1987), 296.

(94) Considerable variations exist for instance between the individuals for whom environment is a source of subsistence and work, such as farmers or indigenous people, and those for whom the environment has an essentially aesthetic value. Not to mention the intra-state tensions related to the different uses of environmental resources; *infra* iii. Strength and Weakness of the Human Rights Mechanisms in Protecting Environmental Interests. On the other hand, highly technical environmental targets, such as emission limits, whilst susceptible of strict enforcement, cannot necessarily be transposed into human rights language.

(95) Sands, 'Human Rights, Environment and the *Lopez-Ostra* Case: Context and Consequences', 6 *EHRLR* (1996), 597, at 616 *et sequ.* In the majority of the ECHR cases referred above, the ECHR Institutions held that, whilst the arguments put forward in the application were not deprived of any

« What constitutes sustainable development and an acceptable environment is *in the end* a matter for each society to determine according to its own values and choices...»⁽⁹⁶⁾

This is true about environmental values considered in relation to other substantive rights, such as the right to life, home, privacy and private property; it is *a fortiori* true about environmental values considered *per se* as part of a right to environment⁽⁹⁷⁾. It is clear indeed, that «[i]f an environmental right is to be more than rhetorical slogan, its advocates must address (...) the definition of healthy and balanced environment to provide a yardstick against which infringements can be measured...»⁽⁹⁸⁾. In the light of (a) the lack of normative determinacy of a right to environment, as distinguished from the 'dimensions' already covered by other human rights provisions, and (b) the uncertainty with respect of its beneficiaries⁽⁹⁹⁾ and its

grounds, a fair balance had been struck between the individual interest, including the environmental interest, and common interest of the community at large; see *Powell & Rayner v. UK*; *Vearncombe et al. v. UK and FRG*, *supra* n. 75; *S. v. France*; *G. & E. v. Norway*, *supra* n. 77; *Fredin v. Sweden*, *supra* n. 85; *Oerlemans v. the Netherlands* and *Pine Valley Development et al. v. Ireland*, *supra* n.85. Neither organ however has established any minimum environmental quality standards, nor even set out criteria to guide States in the balancing power; Desagné, *supra* n. 72, at 365,

(96) Boyle, *ibid. supra* n. 47, at 64 (emphasis added). Likewise, Kiss & Shelton, proponents of a generic human rights to environment, recognise that such right still needs further clarification as far as its implications are concerned to be fully operational; Kiss & Shelton, *International Environmental Law*, at 23; Shelton, 'Human Rights, Environmental Rights, and the Right to the Environment', 38 *Stanford JIL* (1991), 103; Kiss, 'Concept and Possible Implications of the Right to Environment', in Mahoney & Mahoney, *Human Rights in the Twenty-first Century, A Global Challenge* (Martinus Nijhoff, 1993), 551.

(97) Although the right to environment is more often stated in relation to one or the other rights mentioned before; 1972 Stockholm Declaration on the Human Environment refers to an 'environment of quality that permits a life of dignity and well-being' (Princ. 1); 1981 African Charter on Human and Peoples' Rights provides for a 'right to a general satisfactory environment favourable to [peoples'] development' (Art. 24); 1988 Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights on the other hand refers to a right to a healthy environment (Art. 11); see also 1986 WCED-EG Legal Principles for Environmental Protection, 1991 ECE Draft Charter on Environmental Rights and Obligations, and Development and 1995 IUCN Draft Covenant on Sustainable Development, stating a 'fundamental right to an environment adequate for [human beings] health and well-being' (1986 WCED-EG Legal Principles, Art. 1; 1991 ECE Draft Charter, Princ. 1) and 'dignity' (1995 IUCN Draft, Art. 12). The 1994 Draft United Nations Declaration on the Rights of Indigenous Peoples adopts the most general wording and refer to the 'the right to the conservation, restoration and protection of the total environment...' (Art. 28).

(98) Chapman, 'Symposium Overview', *Earth Rights and Responsibilities: Human Rights and Environmental Protection*, 18 *Yale JIL* (1993), 215, at 225; also Boyle, *ibid. supra* n. 47, at 50 *et sequ.* See *contra* Nickel, 'The Human Right to a Safe Environment: Philosophical Perspectives on its Scope and Justification', *Symposium on Earth Rights and Responsibilities: Human Rights and Environmental Protection*, 18 *Yale JIL* (1993), 281, at 285; the author considers that the inherently imprecise content of the right to environment is not a 'significant' problem in the international human rights context, considering the fact that international human rights law can be, *per definitionem*, no more than a set of 'broad normative standards'.

(99) It is a collective right under the 1981 African Charter on Human and Peoples' Rights and the 1994 Draft United Nations Declaration on the Rights of Indigenous Peoples, and an individual human right under the 1988 Additional Protocol to the American Convention on Human, 1986 WCED-EG Legal Principles for Environmental Protection and Development and 1995 IUCN Draft Covenant on Sustainable

nature⁽¹⁰⁰⁾, both environmental⁽¹⁰¹⁾ and human rights lawyers⁽¹⁰²⁾ question the practical utility and desirability, if not the very existence⁽¹⁰³⁾, of a substantive generic right to environment⁽¹⁰⁴⁾.

Development. Besides, as Shelton rightly points out, the right to environment contrasts with existing human rights in that it implicates the rights of both current and future generations; Shelton, 'Human Rights, Environmental Rights, and the Right to the Environment', 38 *Stanford JIL* (1991), 103, 133-134. Hence *Port Hope Environmental Group v. Canada* communication, *supra* n. 79, was concerned with the right to life, health and property of both present and future generations in relation to the dumping of nuclear wastes; see also decision of the Supreme Court of the Philippines in the matter *Minors Oposa and Lujan* cases, *infra* n. 152. See also 1986 WCED-EG Legal Principles for Environmental Protection and Development, Art. 2. See further *supra* Chap. 4. Intergenerational Equity.

(100) As a consequence of disagreement on the content of the right to environment; some authors consider such right as a social and economic right exclusively; see for instance Krämer, *Focus on European Environmental Law* (Sweet & Maxwell, 1992), 4 *et sequ.* Others assimilate a potential right to environment to a solidarity right, but hesitate to qualify solidarity rights as human rights; Boyle, *supra* n. 47, at 48 *et sequ.*

(101) Birnie & Boyle, 190 *et sequ.*; Handl, *supra* n. 86.

(102) Alston, 'A Third Generation of Solidarity Rights: Progressive Development or Obfuscation of International Human Rights Law?', 29 *Netherlands LR* (1982), 307; Alston, 'Conjuring New Human Rights: A Proposal For Quality Control', 78 *AJIL* (1984), 607; Brownlie, 'The Rights of Peoples in Modern International Law', in Crawford (ed.), *The Rights of Peoples* (Clarendon, 1988), Chap. 1; Kooijmans, 'Human Rights - Universal Panacea? Some Reflections on the So-called Human Rights of the Third Generation', 37 *Netherlands ILR* (1990), 315; Leighton Schwartz, 'International Legal Protection for Victims of Environmental Abuse', Symposium on Earth Rights and Responsibilities: Human Rights and Environmental Protection, 18 *Yale JIL* (1993), 355, at 374-375; McGoldrick, 'Sustainable Development and Human Rights: An Integrated Conception', 45 *ICLQ* (1996), 796, at 810 *et sequ.* More generally against the 'generational' classification and ranking of human rights, see Meron, 'On Hierarchy of International Human Rights', 80 *AJIL* (1986), 1.

(103) See for instance Handl, *supra* n. 86, at 125 *et sequ.*

(104) A still important number of authors however conclude in favour such generic right. A early case in favour such right was made by Gormley, *Human Rights and the Environment: The Need for International Cooperation* (Sijthoff, 1976); see more recently Gormley, 'The Legal Obligation of the International Community to Guarantee a Pure and Decent Environment: The Expansion of Human Rights Norms', 3 *Georgetown IELR* (1990), 85; also Brown Weiss' planetary (collective) rights approach, in *In Fairness to Future Generations*, *supra* n. 59, Chap. IV; Spiry, 'Protection de l'environnement et droit international des droits de l'homme - de la dialectique à la symbiose', 74 *Revue de droit international de sciences diplomatiques & politiques* (1996), 169. Thorne disagrees with Handl's conclusion that no right to environment can be inferred from States practice at the international or the national level, and contends on the contrary that there is sufficient evidence in States' practice to support the existence of a generic right to environment. Thorne's approach, however, is very theoretical, based on the premise that «establishing environment as a human right will make the right to environment as justiciable as other previously defined human rights»; the definitional difficulties inherent in the right to environment remain pretty much unresolved; 'Establishing Environment as a Human Right', 19 *Denver JILP* (1991), 301 at 301. Berat follows a similar approach, and even argues that the right to environment should be recognised as a peremptory and overriding rule of international law, «because the survival of the planet depends on it»; 'Defending the Right to a Healthy Environment: Towards a Crime of Geocide in International Law', 11 *Boston University ILJ* (1993), 327, at 338. For a more ethical perspective on such right, see Blackstone, 'Ethics and Ecology', in Blackstone (ed.), *Philosophy and Environmental Crisis* (University of Georgia Press, 1974), 16, at 30 *et sequ.* Kiss & Shelton share the view that there is a value in recognising an independent right to a healthy environment, *inter alia* in that it would strengthen and complement other human rights secured; *International Environmental Law*, at 22; see however the reservation expressed with regards to the clarification of a generic right to environment, Shelton, and Kiss *supra* n. 96.

3) Human rights mechanisms have been used essentially in a 'remedial way'⁽¹⁰⁵⁾, hence confined to those 'extreme' cases where human rights violations have already occurred as a result of environmental nuisance, without any real attempt being made to use those same mechanisms to avoid the violation to take place.

ii. Towards a More Effective Exploitation of Human Rights Mechanisms to Preserve Individual Environmental Interests

Taking into consideration the above remarks, it appears that a more effective use of human rights mechanisms to preserve environmental interests might pass by a more extensive use of procedural human rights to complement existing substantive rights. More 'objective' in their content⁽¹⁰⁶⁾ and more 'preventive' in essence, procedural human rights might not guarantee a substantive right to a clean environment; but it invests individuals with the procedural means to have their interests considered, and influence the national decision-making process where such substantive attributes are at stake.

There is no such right to participate in the elaboration of programmes and policies recognised in international law in general⁽¹⁰⁷⁾ and in international human or environmental law in particular⁽¹⁰⁸⁾. On the other hand, the right to take part in the

(105) Shelton, 'Human Rights, Environmental Rights, and the Right to the Environment', 38 *Stanford JIL* (1991), 103, at 136.

(106) Hence less susceptible to be left to the appreciation of the State as it is often the case for substantive rights. From the various individual applications made in relation to nuclear activities, only that based on procedural guarantees -in that case, the right to a decision reviewed by an independent authority- has reached the stage of a consideration on the merits (see *Greenpeace Schweiz et al. v. Switzerland*, *supra* n. 81) whilst those motivated on violation of substantive rights were all dismissed as obviously ill-founded; see cases reviewed *supra* n. 80.

(107) See Rojas-Albonico, *Le droit au développement comme un droit de l'homme*, Ph.D dissertation (Peter Lang, 1984), 159 *et sequ.* Such a right is only recognised in non-binding documents; see for instance 1994 Draft United Nations Declaration on the Rights of Indigenous Peoples, Art. 19. The importance of public participation in the context of development was particularly acknowledged in the 1970 Strategy for the Second Development Decade, Paras. 78 and 84; see also 1980 Strategy for the Third Development Decade, Para. 51.

(108) People's right to participate 'in the formulation of decisions (or policy) of direct concern to their environment' has been recognised in non-binding or draft documents only; 1982 World Charter for Nature, Princ. 23; 1995 IUCN Draft Covenant on Environment and Development, Art. 12(3) and (6). 1992 Rio Declaration on Environment and Development avoids once again human rights terminology, and states simply that 'environmental issues are best handled with the participation of all concerned citizens, at the relevant level'; Princ. 10. Some EC Directives establish a certain degree of participation in relation to specific issues; see most importantly Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, [1985] OJ L175/40, as amended by Council Directive 97/11/EC; Art. 6, requests any public or private projects susceptible of having an impact on the environment to be made public and the opportunity left for public comments before the realisation of the projects; on which see Douglas-Scott, 'Environmental Rights in the European Union: Participatory Democracy or Democratic Deficit?', in Boyle & Anderson, Chap. 6, at 120. It is noteworthy that the European Commission has recently rejected as too far reaching further extension of public involvement in

direction of public affairs, directly, *via* freely chosen representatives or through the exercise of other civic rights⁽¹⁰⁹⁾ secures a certain degree of participation at a political level to individuals⁽¹¹⁰⁾. The extent to which such human rights provisions apply to environmental policy, however, remains unclear⁽¹¹¹⁾.

The freedom of expression and the freedom to receive and impart information⁽¹¹²⁾ impose a general duty upon States, 'not to obstruct access to information which is available'⁽¹¹³⁾. It is yet to be decided the extent to which the freedom of information under any of the human rights instruments mentioned, guarantees a genuine *right of access* to environmental information.

The ECHR Court has so far recognised a right of access to certain information related *inter alia* to health and public safety⁽¹¹⁴⁾ and to privacy⁽¹¹⁵⁾, upon the restricted condition that the exercise of such right would not affect equally important interests of other people⁽¹¹⁶⁾; it denied that the right of information confers a general right of access to any requested information⁽¹¹⁷⁾. A recent application filed by a group of Italian women over the failure of Italian authorities to provide information about the risks presented by a chemical factory and about the safety measures foreseen in the event of an accident raised the more general question of what environmental information is to be disclosed under the Convention. The ECHR Commission declared the application

the scoping phase of impact studies; reported in *Sweet & Maxwell's Environmental Law Bulletin*, March 1997, 2. In Krämer's view however, EC law falls short of conferring a genuine right to consultation; *Focus on European Environmental Law*, (Sweet & Maxwell, 1992), 22.

(109) 1948 Universal Declaration on Human Rights, Arts. 19 and 21; 1966 International Covenant on Civil and Political Rights, Arts. 19 and 25; 1950 European Convention on Human Rights, First Protocol, Art. 3; 1969 American Convention on Human Rights, Art. 23; 1981 African Charter on Human and Peoples' Rights, Art. 13(1).

(110) See further Steiner, 'Political Participation as a Human Right', 1 *Harvard Human Rights Yearbook* (1989), 77.

(111) Some authors invoke civic rights to legitimise their claim of a 'right of democratic governance', including in environmental matters; Tolentino, 'Good Governance Through Popular Participation in Sustainable Development' in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 9.

(112) 1948 Universal Declaration on Human Rights, Art. 19; 1966 International Covenant on Civil and Political Rights, Art. 19; 1950 European Convention on Human Rights, Art. 10; 1969 American Convention on Human Rights, Art. 13; 1981 African Charter on Human and Peoples' Rights, Art. 9.

(113) Harris *et al.*, *Law of the European Convention on Human Rights* (Butterworths, 1995), at 379 *et sequ.*; Weber, 'Environmental Information and the European Convention on Human Rights', 12 *HRLJ* (1991), 177, at 179 *et sequ.*

(114) *Sunday Times v. UK*, Ser.A, No 30, Para. 66.

(115) *Gaskin v. UK*, Ser.A, No. 160, Para. 49.

(116) See 1950 European Convention on Human Rights, Art. 10(2).

(117) See ECHR Court in *Leander v. Sweden*, 1987, Ser. A, No. 116, Para. 74; ECHR Commission in *Z. v. Austria*, Applic. 10392/83, 56 *D&R* (1988), 13.

admissible on this ground, but reserved its opinion on the issue to the decision on the merits of the case⁽¹¹⁸⁾.

Outside the strict confines of human rights law, a right of access to environment-related information is also recognised in the European Community context⁽¹¹⁹⁾. The need to improve public access to information on the environment was underlined in the Fourth Action Programme (1987-1992)⁽¹²⁰⁾. A directive was subsequently adopted⁽¹²¹⁾, setting general rules and principles which guarantee free access to environmental information *largo sensu*⁽¹²²⁾ detained both by national Governments authorities and by certain private entities supplying public services, regardless of any specific interest⁽¹²³⁾. No similar clear-cut guarantee applies, however, to the Community institutions themselves⁽¹²⁴⁾.

(118) *Anna Maria Guerra and 39 Others v. Italy*, Applic. 14967/89.

(119) See also 1991 ECE Convention on Environmental Impact Assessment, Art. 2(6), committing States to establish procedures to allow for the effective participation of the people likely to be affected in the impact assessment process. It must be stressed however that, unlike human rights provisions, the 1991 ECE Convention on Environmental Impact Assessment commits States not only in respect of their own nationals, but also in respect of nationals of potentially affected States. See also information clause in Nordic Convention on the Protection of the Environment, Art. 7, and the 1993 Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (arts 14 & 15). See further Sands & Werksman, 'Procedural Aspects of International Law in the Field of Sustainable Development: Citizens' Rights', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 12, at 180 *et sequ.*; Bowman, 'The Convention on Civil Liability for Damages Resulting from Activities Dangerous to the Environment', 2 *Environmental Liability* (1994), 11.

(120) Fourth Action Programme 1987-1992, [1987] OJ C328/1, at 4.

(121) Directive 90/313/EEC on the Freedom of Access to Information on the Environment, [1990] OJ L158/56; reprinted in 1 *YbIEL* (1990), 492; on which see Hallo, 'Directive 90/313/EEC, on the Freedom of Access to Information on the Environment: Its Implementation and Implications', in Hallo (ed.), *Access to Environmental Information in Europe* (Kluwer Law International, 1996), Chap. 1; Krämer, 'La Directive 90/313/CEE sur l'accès à l'information en matière d'environnement: genèse et perspectives d'application', 353 *Revue du Marché Commun* (1991), 866; Wheeler, 'The Right to Know in the European Union', 3 *RECIEL* (1994), 1. Similar requirements to provide access to information were made with respect to particular environmental issues; hence instance Directive 67/548/EEC, [1967] OJ L196/1, as amended by Directive 92/32/EEC on the Packaging and Labelling of Dangerous Preparations [1992] OJ L154/15, requires the labelling of a range of products to inform product users of risks; Directive 82/501/EEC, on Major Accidents Hazards of Certain Industrial Activities, or Seveso Directive, [1982] OJ L230/25, Art. 8, that requires firms to inform both national and local officials or risks of accidents and safety measures in place to facilitate emergency planning; see further Jans, *European Environmental Law*, (Kluwer Law International, 1995), 288 *et sequ.* Shelton notes that the wording of Art. 8 of the Seveso Directive is sufficiently clear and unconditional, and defines rights that individuals can assert against the EC States, and therefore concludes to direct effect of the provision; 'Environmental Rights in the European Community', 16 *Hastings ICLR* (1993) 557, at 578.

(122) See definition in Directive 90/313/EEC, Art. 2(a). The access is not confined to the information on the state of the environment of EC States, and encompasses access to information on exported products and installations, as well as information on global environmental issues, such as the ozone layer depletion, climate change, or even deforestation; Krämer, *supra* 121, at 869-70.

(123) A very similar wording is used in 1995 IUCN Draft Covenant on Environment and Development, Art. 12(3).

(124) Krämer, *Focus on European Environmental Law* (Sweet & Maxwell, 1992), 19 *et sequ.*; Krämer,

The guarantee of access to information might appear, *prima facie*, more extensive in the European Community context than in human rights instruments like the 1950 European Convention on Human Rights⁽¹²⁵⁾, in the sense that the access guaranteed is independent from any specific legal interest and is not related to any substantive right. A closer look at the conditions under which such right can be derogated or limited, however, tends to suggest otherwise. Unlike human rights instruments, which usually subordinate any derogation to their provisions to the double requirements of necessity and proportionality, the EEC Directive 90/313 on the Freedom of Access to Information on the Environment, and other Directives providing for a limited access to information, require no weighing of interests when applying one of the exhaustively listed causes of restriction of such right⁽¹²⁶⁾. Whilst some of these EEC Directives could be interpreted as conferring a human right to environmental information⁽¹²⁷⁾, there are serious discrepancies among States in the degree of transposition of such 'right' in the domestic legal order. Some States recognise no general right to environmental information⁽¹²⁸⁾, whilst others secure limited rights⁽¹²⁹⁾, or indeed full-fledged rights to environmental information⁽¹³⁰⁾.

supra 121, at 869.

(125) Despite the fact that the 1992 EU Treaty explicitly provides that «The Union shall respect the fundamental rights and freedoms recognised by the Convention on the Safeguard of Human Rights and Fundamental Freedoms», the EC is not *per se* a party to the 1951 European Convention on Human Rights, and the extent to which ECHR standards are 'incorporated' into the European Community legal order remains a controversial issue; the European Court of Justice however makes references to the Convention, although not explicitly to the case-law of ECHR organs; see further on that question, Shelton, 'Environmental Rights in the European Community', 16 *Hastings ICLR* (1993) 557, at 558 *et sequ.*; Weatherill & Beaumont, *EC Law*, 2nd edn (Penguin, 1995), 254 *et sequ.*

(126) Exhaustive list of exceptions to the principle of free access in Directive 90/313/EEC, Art. 2(2); see however restrictive reading of the exception in EC Case T-194, *John Carvel and Guardian Newspapers Ltd v. Council of the European Union*, reported in 5 *EELR* (1996), 23.

(127) See Krämer, *supra* n. 121, at 871 *et sequ.*; Shelton, 'Environmental Rights in the European Community', 16 *Hastings ICLR* (1993) 557, at 573; Wheeler, *ibid. supra* n. 121; Weber, 'Environmental Information and the European Convention on Human Rights', 12 *HRLJ* (1991), 177, at 183; Weber only refers to a right of access to environmental information, although his way of presenting such right tends to suggest that he regards it as a human right. Shelton seems to endorse the view that (a) the right to information provided under the various EEC Directives mentioned above, n.124, must be interpreted 'in the sense of a human right', and (b) the relevant provisions of the EC Directives have a direct effect, and could give rise to a right to compensation by a State in case of failure to duly implement the Directives at the domestic level, as provided by the European Court of Justice in the *Francovich* case; Shelton, *ibid.*, at 578 *et sequ.*, and EEC Joined Cases C-6/90 & 9/90, *Francovich v. Italy*, [1991] *ECR* I-5987.

(128) For instance Belgium, Germany, Ireland, Luxembourg, and the UK.

(129) For instance Denmark, France, Italy and the Netherlands.

(130) Greece, Portugal and Spain; see Douglas-Scott, 'Environmental Rights in the European Union: Participatory Democracy or Democratic Deficit?', in Boyle & Anderson, Chap. 6, at 117; Wheeler, *supra* n. 121, at 2 *et sequ.* See also detailed review of the regime of access to environmental information in the 'EU of the 12' in Hallo (ed.), *supra* n. 121, Part II, in the new European States (Austria, Finland

Finally, the right to a fair trial, interpreted by the ECHR Court as securing anyone the right to challenge a *decision* (131) that would affect his/her rights under private law⁽¹³²⁾ before an independent and impartial tribunal, offers a certain guarantee of taking into consideration individual environmental (or non environmental) interests in the decision-making process, insofar as those interests are related to some other human rights guaranteed under the Convention⁽¹³³⁾. The fair trial provision has both preventive and remedial functions, but remains purely procedural. As rightly underlined by Churchill, the fair trial provision «does not provide any substantive criteria for adjudication» and would not, for example, require the tribunal «to weigh the proposed development against environmental interests in a particular way, but would merely require it to adjudicate on the basis of whatever national law was applicable»⁽¹³⁴⁾.

An increasing number of scholars argue that, should a right to environment be recognised, it would be 'procedural' or 'participatory', rather than substantive. Under this view, environmental rights would complement 'classic' procedural human rights provisions and secure access to environmental justice and participation in environmental decision-making (including access to information)⁽¹³⁵⁾. Such an approach was reflected

and Sweden), *ibid.* Part III, and in selected central and east European States, *ibid.* Part IV.

Access to environmental information was considerably enlarged in the US after December 1984 Bhopal tragedy, with the enactment of the 1986 Emergency Planning and Community Right to Know Act, codified at USC Sect. 11001-11050; see a very brief review in Robbins, 'Doing Business in the Sunshine: Public Access to Environmental Information in the United States', 3 *RECIEL* (1994), 26.

(131) It exists no right to challenge a policy in general, but only decisions, probably including plans or projects, taken on the basis of a given policy.

(132) *Ringeisen v. Austria*, 1971, Ser.A, No 13, Para. 94; *König v. FRG*, 1978, Ser. A No. 27, Para. 95; see further on the definition of civil rights, Harris *et al.*, *Law of the European Convention on Human Rights* (Butterworths, 1995), at 174 *et sequ.*

(133) A breach of the fair trial provision was found for instance by the ECHR Court in *Zander v. Sweden*, 1993, Ser. A, No. 279B; *Fredin v. Sweden*, *supra* n. 85; *de Gouffre de la Pradelle v. France*, 1992, Ser.A, No. 253-B. The fair trial argument was dismissed by the ECHR Court in *Oerlemans v. the Netherlands*, *supra* n.85; and by the ECHR Commission in *Braggs v. UK*, Applic. 9310/81 see Sands & Werksman, 'Procedural Aspects of International Law in the Field of Sustainable Development: Citizens' Rights', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 12, at 197 *et sequ.*

(134) Churchill, 'Environmental Rights in Existing Human Rights Treaties', in Boyle & Anderson, Chap. 5, at 96.

(135) Birnie & Boyle, 194 *et sequ.*; Boyle, 'The Role of International Human Rights Law in the Protection of the Environment', in Boyle & Anderson, Chap. 3, at 59 *et sequ.*; Douglas-Scott, 'Environmental Rights in the European Union: Participatory Democracy or Democratic Deficit?', in Boyle & Anderson, Chap. 6; Kiss, 'Environnement et Développement ou Environnement de Survie?', 2 *JDI* (1991), 263, at 267; McGoldrick, 'Sustainable Development and Human Rights: An Integrated Conception', 45 *ICLQ* (1996), 796, at 810 *et sequ.*; Sands & Werksman, 'Procedural Aspects of International Law in the Field of Sustainable Development: Citizens' Rights', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 12; See also Handl, *supra* n. 86; Handl firmly reasserted his position in a paper on 'Human Rights and the Environment', which he delivered at the Spring Conference of the International Law Association, British Branch, on

in the most recent draft and non-binding statements of the right to environment, which focus on its procedural implications without elaborating further on its potential substantive implications⁽¹³⁶⁾.

iii. Strength and Weakness of the Human Rights Mechanisms in Protecting Environmental Interests

Human rights mechanisms could, to a certain extent, make up for the failure of classic environmental rules to duly integrate the environmental values and interests of individuals. First and foremost, it endows individuals with *locus standi* to take action against their national State for failing to respect or protect the domestic environment, thereby closing a loophole of classic 'transboundary' environmental rules, and introducing a certain degree of environmental accountability from States⁽¹³⁷⁾:

«Where [the argument a right to a decent environment] is likely to have most impact is in those cases where protection of a state's own environment is affected, since in general states have greater freedom under existing law to

'*Transnational Environmental Litigation and International Perspective*', held in Nottingham, on 9-10 May 1997. He suggested that the 'right to environment' had to be construed as a functional right, as a 'right to raise concern'.

(136) See for instance 1992 Rio Declaration on the Environment, Princ. 10, which underlines that «[e]nvironmental issues are best handled with the participation of all concerned citizens at the relevant level», and further recalls the importance of information, public awareness and effective access to judicial and administrative proceeding; 1992 Agenda 21 provides nowhere for a right to environment, but extensively refers to the active involvement of people in general, and specific groups in particular; *supra* n. 1 and n.168. See also the Draft Principles on Human Rights and the Environment, proposed by the Special Rapporteur for the Sub-Commission on Prevention of Discrimination and Protection of Minorities in her Final Report on *Human Rights and the Environment*, *supra*; the Draft Principles are appended to Boyle's contribution in Boyle & Anderson, at 65. Likewise, 1995 IUCN Draft Covenant on Environment and Development, Art. 12, only briefly states that everyone is bestowed with the right to an healthy environment (Para. 1) and the correlated duty to preserve the environment (Para. 2), and, without giving further indications of the standards to be applied to assess such substantive rights and obligations, apart from the necessity to «...respect and ensure (...) the satisfaction of basic human needs, in particular the provision of potable water»; (Para. 5). On the other hand, Art. 12 elaborate on the procedural dimensions of a right to environment, and refers to informational rights (Para. 3), access to judicial and administrative proceedings (Para. 4), and generally the involvement of indigenous peoples and local communities (Para. 6). Likewise, the draft Covenant on Global Environmental Conservation and Sustainable Use of Natural Resources, prepared by environmental law experts of 43 States attending the World Conference of environmental law associations, Limoges, 1990, provides for a human right to a clean environment, yet a) elaborates the substance of the right referring exclusively to States' correlative, and b) stresses more the participative aspect of such 'right' than the substantive subjective aspects thereof. The Draft Covenant, which otherwise follows closely the recommendation put forwards by WCED-EG, is reproduced in *Déclaration de Limoges, Rapport de la Réunion mondiale des associations de droit de l'environnement*, 13-15 November 1990, Limoges (Presses Universitaires de France, 1990), at 119 *et sequ.* See also 1982 World Charter for Nature, Princ. 23.

(137) One should underline however that such loophole has already been addressed in certain environmental treaties, for instance with the introduction of the environmental impact assessment requirement (*supra* Chap. 3/4/iii. Prior Environmental Impact Assessment) or with the endorsement of the principle of national treatment for claims brought by the citizen of another State, as it is for instance under the 1974 Nordic Convention on the Protection of the Environment.

manage their internal problems as they please.»⁽¹³⁸⁾

States' competence with respect to their own environment, albeit still largely unrestricted under international environmental law, finds some limits in international human rights law, which can, in certain instances, be enforced by individuals directly.

Secondly, contrary to environmental responsibility or liability mechanisms, the resort to human rights procedures is not conditioned by the complex demonstration of the relation of causation between a given risk, action or product, and the actual or potential harm to the environment⁽¹³⁹⁾. Human rights procedures imply a demonstration that the potential or actual environmental harm infringes a protected interest of the applicant⁽¹⁴⁰⁾.

The use of human rights mechanisms is also associated with a number of disadvantages, all related to the predominantly individualistic approach characteristic of the most human rights instruments and often inappropriate in the context of environmental protection⁽¹⁴¹⁾. Conceived originally to protect discriminated groups⁽¹⁴²⁾, international human rights have evolved into predominantly *individual* prerogatives; the protection of collective rights and interests has become the exception rather than the rule⁽¹⁴³⁾. The fundamental characteristics of groups, such as race,

(138) Birnie & Boyle, at 189; also Boyle, *ibid. supra* n.135, at 53; Handl, 'Human Rights and the Environment', paper delivered at ILA British Branch, 'Transnational Environmental Litigation and International Perspective', Spring Conference, Nottingham, 9-10 May 1997; Shelton, 'Human Rights, Environmental Rights, and the Right to the Environment', 38 *Stanford JIL* (1991), 103, at 138. On the failure of 'old' environmental rules to apply to 'domestic' environment, and the difficulty to adopt more intrusive rules see *supra* Chap. 2/2/ iii. Sovereignty over Environmental Resources and Environmental Policies versus of Globalisation of Environmental Standards and Policies.

(139) Anderson, 'Human Rights Approaches to Environmental Protection: An Overview', in Boyle & Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, 1996), Chap. 1. On the difficulty inherent in the demonstration of such causality link in environmental responsibility and liability cases, see *supra* Chap. 3/3/ iii. Causality Link Between the Object and the Harm/Risk; see also the concrete illustrations in Harding, 'Practical Human Rights, NGOs and the Environment in Malaysia', in Boyle & Anderson, Chap. 11.

(140) Desagné, *supra* n. 72, at 285.

(141) Handl, *supra* n.138. Waldron considers more generally that the individualistic language of human rights is inappropriate to preserve communal (*viz.* collective) aspirations enshrined in third generation rights and that include the right to environment; *supra* n. 93, at 314 *et sequ.*

(142) On the origins and development of human rights as collective rights, see *inter alia* Dinstein, 'Collective Human Rights of Peoples and Minorities', 25 *ICLQ* (1976), 102; Ermacora, 'The Protection of Minorities Before the United Nations', 182 *RdC* (1983-IV), 247; Lerner, 'From Protection of Minorities to Group Rights', 18 *Israel Yb Human Rights* (1988), 101; and *Group Rights and Discrimination in International Law* (Martinus Nijhoff, 1991), Chap. 1; Muldoon, 'The Development of Group Rights', in Sigler (ed.), *Minority Rights, A Comparative Analysis* (Greenwood Press, 1983) Chap. 3; Thornberry, 'Is There a Phoenix in the Ashes? - International Law and Minority Rights', 15 *Texas ILJ* (1980), 421.

(143) The 1981 African Charter on Human and Peoples' Rights, often mentioned as an example of protection of collective rights, is worded both in terms of individual and peoples' rights, and it remains unclear how far peoples' rights are implemented *qua* group rights, or in their individual component; see

religion, language, origin or culture, are most frequently considered and preserved on an individual basis, *via* general non-discrimination clauses⁽¹⁴⁴⁾. Consequently, implementing organs have systematically reasoned in terms of conflict of individual *versus* collective interests, thereby preserving a large margin of appreciation to States in the balancing of those interests. On the other hand, the organs have rarely sought to balance conflicting *collective* interests. Yet, as stressed by one author, environmental 'conflict' cannot necessarily be reduced to a matter of individual interest versus society's interest:

«[J]ust as there are rights which are essentially individual, i.e. that can be protected only in the individual himself, there are also rights that can be 'best protected through a group', particularly in the case of 'group victimization'. Environmental interests are clearly group interests inasmuch as individual interests.»⁽¹⁴⁵⁾

On the contrary, environmental conflicts often arise as a result of a tension between society's (collective) interest *versus* state (collective) interest, or between two conflicting *collective* interests of the society, such as the economic or social interest *versus* environmental necessity. In this context, classic human rights mechanisms appear *prima facie* ill-suited to secure due consideration for environmental interests for the following reasons:

First of all, only those entities or individuals whose protected individual interest has been, or could be, adversely affected by environmental degradation or pollution for instance, have the *locus standi* to bring a claim under existing human rights enforcement procedures. There can be no human rights action based on pure environmental grounds

Brownlie, 'The Rights of Peoples In Modern International Law' and Crawford, 'The Rights of Peoples: 'Peoples' or 'Governments'?', in Crawford (ed.), *The Rights of Peoples* (Clarendon, 1988), Chap.1 and 4. More particularly of indigenous peoples as a 'group': Falk, 'The Rights of Peoples (In Particularly Indigenous Populations)', and Nettheim, 'Peoples' and 'Populations': Indigenous People and the Rights of Peoples', in Crawford (ed.), *ibid.*, Chap. 2 and 7; Lerner, *Group Rights and Discrimination in International Law*, *supra* n. 142, Chap. V. For a catalogue of possible group rights, see Lerner, *ibid.*, at 34 *et sequ.* Even the right to self-determination, *prima facie* a clearly collective right, has not been clearly qualified as such; the Human Right Committee has remained undecided on the question, see *A.D. v. Canada* (1984), Communic. No R.19/78, *Selected Decisions of the Human Rights Committee*, Vol.2 (Seventeenth to Thirty-second sessions), 23. The Arbitration Commission of the Conference on Yugoslavia (so-called Badinter Commission) apparently construes the self-determination as an individual prerogative; see *Opinion No. 2*, 11 January 1992; 92 *ILR* (1993), 167, at 168-69.

(144) See 1945 UN Charter, Art. 1(3); 1948 Universal Declaration on Human Rights, Art. 2(1) and Art. 7; 1966 International Covenant on Civil and Political Rights, Arts. 2(1) and 26; 1950 European Convention on Human Rights, Art. 14; 1969 American Convention on Human Rights, Arts. 1 and 24; 1981 African Charter on Human and Peoples' Rights, Arts. 2, 3 and 19. On the rule of non discrimination, see Lerner, *supra* n. 142, Chap. 2 (at 24 *et sequ.*).

(145) Cançado Trindade, 'The Contribution of Human Rights Law to Environmental Protection, With Specific Reference to Global Environmental Change', in Brown Weiss (ed.), *Environmental Change and International Law: New Challenges and Dimensions*, United Nations University Press, 1992), Chap. 9.

brought forwards regardless of, or even *against*, individual interests⁽¹⁴⁶⁾, nor can there be an action to vindicate the collective interests of society as a whole⁽¹⁴⁷⁾. The possibility of *actio popularis* is ruled out under most human rights mechanisms; individual applications under the International Covenant on Civil and Political Rights are reserved to the actual victim⁽¹⁴⁸⁾; the Human Rights Committee, however, have shown some flexibility in its interpretation of this requirement, and does not request from the applicant to prove the alleged violation at the admissibility stage, contenting itself with *prima facie* evidence of the violation⁽¹⁴⁹⁾. Likewise, only the actual victim, and under strict conditions prospective victim, may act under the ECHR system⁽¹⁵⁰⁾. Under the

(146) On the inherent 'antropocentricity' of human rights mechanism to protect the environment, see Birnie & Boyle, at 193; Boyle, *ibid. supra* n.135, at 51; Redgwell, 'Life, the Universe and Everything : A Critique of Antropocentric Rights' in Boyle & Anderson, Chap. 4.

(147) Handl, *supra* n. 86, at 133 *et sequ.*

(148) See 1966 Optional Protocol Additional to the Covenant. The Human Rights Committee underlined that the main characteristic of the *actio popularis* does not pertain to the number of applicants, but to the lack of individual interest of the applicants; see *E.W. et al. v. Netherlands* (1993), Communic. No. 429/1990, CCPR/C/47/429/1990, Annexe. The application was filed by a group of 6588 Dutch citizens, and alleged that the decision of the Netherlands to consent to the deployment of nuclear missiles on the national territory amounts to a violation of 1966 International Covenant on Civil and Political Rights, Art. 6.

(149) See *Aumeeruddy-Cziffra v. Mauritius (Mauritius Women case)* (1981), Communic. No 35/1978, *Selected Decisions of the Human Rights Committee*, Vol. 1 (Second to Sixteenth sessions), 67; *Lovelace v. Canada* (1986), Communic. No 112/1981, *Selected Decisions of the Human Rights Committee*, Vol. 2 (Seventeenth to Thirty-second sessions), 28; *Broeks v. Netherlands* (1987), Communic. No. 172/1984, *Selected Decisions of the Human Rights Committee*, Vol. 2 (Seventeenth to Thirty-second sessions), 196; extracts of the three cases reprinted in Harris, *Cases and Materials*, at 467 *et sequ.* The Committee equally displayed a certain degree of open-mindedness to Canada's application on the behalf of 'represent and future generations, although it did not directly decided on the *locus standi* of persons acting exclusively on behalf of future generations as some authors of the applications were living persons; *Port Hope Environmental Group v. Canada*, *supra* n. 79. The Committee however returned to a strict interpretation of quality of victim in the case of *Bordes & Temcharo v France*, Communic. No 645/1995, *supra* n. 80. See also *A.D. v. Canada*, *supra* n. 143; the application of the representative of a tribal community was dismissed for failure to demonstrate that the applicant was 'personally victim' of the alleged violation.

(150) ECHR Court's Rules of Procedure; also *Klass v. Germany*, Ser. A, No 28 (1978), Para. 34. The Court however has constantly stressed that the existence of a violation was conceivable even without an actual prejudice, as long as the prospective or potential victim can demonstrate the *risk* of being injured; *Marckx v. Belgium*, Ser. A, No 31 (1979), Para. 27; *Soerings v. UK*, Ser.A, No 161 (1989), Para. 85. In the *Taura* case, *supra* n. 80, the Commission explicitly stated the Convention does not allow for *actio popularis*, and requests for the exercise individual right of action that «le requérant se prétende de manière plausible lui-même victime directe ou indirecte d'une violation de la convention...»; the Commission defined 'plausible' as allegation made «de manière défendable ou circonstanciée, que faute de précautions suffisantes prises par les autorités, le degré de probabilité de survenance d'un dommage est tel qu'il puisse être considéré comme constitutif d'une violation, à condition que l'acte incriminé n'ait pas des répercussions trop lointaines»; in 18 *Revue Universelle de Droits de l'Homme* (1996), 315, at 322. In the recent *Balmer-Schafroth & Others v. Switzerland* application, that concerned the increase in the activity of the very controversial Muhleberg nuclear power station, the Court recognised the quality of prospective victims to a group of citizen who lived nearby the station but had not been actually affected (yet) by the running thereof. The Court however dismissed the allegation of the violation of article 6(1) ECHR on the ground that the applicants had failed to demonstrate 'personal exposure' to imminent

African mechanism only the alleged victim is admitted to file an application⁽¹⁵¹⁾. The Inter-American system is more liberal in that respect and provides for a compulsory individual petition procedure and admits anonymous application or *actio popularis*⁽¹⁵²⁾. At the domestic level, certain legal systems know an *actio popularis* for environmental matters⁽¹⁵³⁾, whilst others adopt a restrictive interpretation of the actual injury component of the *locus standi*⁽¹⁵⁴⁾. Of particular interest to international environmental lawyers is the Philippine Supreme Court's recent decision to grant a *certiorari* to an application filed by a group of children, acting on their own right as well as in the interest of both present and future generations, against the decision of the Government to renew timber license agreements leading in the long term, to the over exploitation of

danger; applic. No 67/1996/686/676, judgement of 26 August 1997; noted at *EHRLR* (1998), 94.

(151) Rules of Procedures of the African Commission on Human and Peoples' Rights.

(152) 1969 American Convention on Human Rights, Art. 41.

(153) See for instance public interests litigation under the Swiss Federal Law on the Protection of Nature and Landscape (Art. 12), 1 July 1966, Recueil Systématique des Lois Fédérales 451; Swiss Federal Law on the Protection of the Environment (Art. 55), 7 October 1983, Recueil Systématique des Lois Fédérales 841.01; this provision is not affected by the proposed amendments to the Law on the Protection of the Environment, submitted to the Federal Chambers in 1996; draft amendments reproduced in Feuille Fédérale 1996 I 237. See also public interest litigation in India; review of relevant case-law in Anderson, 'Individual Rights to Environmental Protection in India', in Boyle & Anderson, Chap. 10. See also brief reference to relevant provisions in Denmark, France, Germany, Ireland, Italy, the Netherlands and Portugal in Shelton, 'Environmental Rights in the European Community', 16 *Hastings ICLR* (1993) 557, at 580, n. 112.

(154) See for instance the US. In a leading environmental case, dating back from 1972, US Supreme Court, without rejecting the right to conservation of the environment *per se*, denied *locus standi* to a well-known environment conservation group, to oppose, on environmental grounds, the realisation of a recreational complex in the Mineral King Valley, Sierra Nevada Mountains, in California. The Court considered that the Club, though committed to conservation of natural heritage, did not have an actual interest that would be affected should the development plan be realised; *Sierra Club v. Morton* (Secretary of the Interior of the US), 405 *US* 727, 19 April 1972. See Stone's famed article on the legal rights of natural objects inspired on that case, 'Should Trees Have Standing?', 45 *Southern California LR* (1972), 450. Soon after, the US Congress passed the 1973 Endangered Species Act, which bestows upon 'any person' the right and capacity to enforce the Act. Yet recently, US Supreme Court, in a much publicised decision in the case *Lujan v. Defenders of Wildlife*, reversed the ruling of the Eighth Circuit Court of Appeals, and advocated a narrow interpretation of the actual-injury component of the standing requirements under the Act mentioned above, and decided that the actual injury must be, cumulatively, (1) current or imminent, (2) affect the applicant personally; *Defenders of Wildlife v. Lujan*, 91 F 2d 117 (8th Cir. 1990); *Lujan v. Defenders of Wildlife* (1992), 119 L Ed 2d 351; on which see Just, 'Intergenerational Standing under the Endangered Species Act: Giving Back the Right to Biodiversity after *Lujan v. Defenders of Wildlife*', 71 *Tulane LR* (1996), 597. US restrictive interpretation of the actual injury component is based on a no less restrictive interpretation of the separation of powers under US Constitution Art. III, Sect. 2, which provides that judicial powers extend to *cases and controversies*. For a detailed comparative examination of the legal means of public interest action opened to environmental NGOs in Switzerland and the US, see Tanquerel, *Les voies de droit des organisations écologistes en Suisse et aux Etats-Unis* (Helbing & Lichtenhahn, 1996). See further examples of restrictive interpretation of *locus standi* in Sands, 'Applying EC Environmental Law: Obstacles to Citizen Enforcement', A Report from the Dicey Conference, Oxford, 15-16 March 1994; Ormond, "Access to Justice" for Environmental NGOs in the European Union', in Deimann & Dyssli (eds.), *Environmental Rights, Law Litigation and Access to Justice* (Cameron May, 1995), Chap. 6.

Philippine rainforests. The Supreme Court, drawing directly upon the 'highest law of mankind', supported the view that (a) the right to a clean environment was a substantive and operable right, specific enough to be enforced into court, and (b) that the children had the *locus standi* to act for themselves, for their generation and for future generations. It was already mentioned that the case was finally not decided on the merit⁽¹⁵⁵⁾. Human rights protection of environmental value remains partial in every meaning of the term; clearly, «not all issues can be resolved in the simple language of rights»⁽¹⁵⁶⁾, neither can every right be conceived in purely individual terms⁽¹⁵⁷⁾.

Another reasons for human rights mechanisms being sometimes ill-suited to ensure full consideration of all environmental interests pertains to the fact that the well-founded character of individual application depends on the weighing of the individual interests of the applicant *versus* the collective interests or common interests of the society. Apart from the fact that such an approach rests upon an over-reductive and individualistic conception of environmental conflicts and focuses only on *one* possible source of tension, human rights bodies are quite understandably reluctant to favour individual interests over the common interest⁽¹⁵⁸⁾.

It is also clear that whilst an individual environmental interest might not be sufficiently compelling, or indeed in certain cases even relevant, to override a conflicting collective interest, the common environmental interest of the society or part of the society could be so. Yet in classic human rights mechanisms, such 'common' interest is not taken into consideration *to support* individual application but only to *oppose* it⁽¹⁵⁹⁾, as if individual and collective interests were inherently antithetical⁽¹⁶⁰⁾. Paraphrasing Waldron, it could be argued that the integrity of the environment is not only a condition predicated of individuals; it also and essentially applies to entire societies or groups and,

(155) *Minors Oposa v. Secretary of the Department of Environment and Natural Resources*, July 30, 1993; 33 *ILM* (1994), 173; on which see Allen 'The Philippine Children's Case: Recognizing Legal Standing for Future Generations', 6 *Georgetown ILR* (1994), 713; La Viña, 'The Right to a Sound Environment in the Philippines: The Significance of the *Minors Oposa* Case', 3 *RECIEL* (1994), 246; see further *supra* Chap. 4/3/ii. Legal Basis for a Planetary Trust: Intergenerational Equity as a Fundamental Principle Deeply Rooted in International Law.

(156) Anderson, 'Human Rights Approaches to Environmental Protection: An Overview', in Boyle & Anderson, Chap. 1, at 22.

(157) Triggs, 'The Rights of 'Peoples' and Individual Rights: Conflict or Harmony?' in Crawford (ed.), *The Rights of Peoples* (Clarendon, 1988), Chap. 9, at 145-46. This is particularly well epitomised by the position of the ECHR Court in the *Case Relating to Certain Aspects of the Laws on the Use of Languages in Education in Belgium* (Merits), Ser. A, No 6 (1968), 1 *EHRR* (1979/1980), 252.

(158) See *supra* 3/i. Use of Human Rights Procedures to Preserve Individual Environmental Interests.

(159) Waldron, *supra* n. 93, at 309 *et sequ.*

(160) For a demonstration of the contrary, see Triggs, *ibid. supra* n. 157.

in certain cases, to the entire world⁽¹⁶¹⁾. Classic human rights mechanisms might thus appropriately preserve environmental values insofar as predicated of individuals, whilst they are ill-suited to protect environmental values predicated of an entire group⁽¹⁶²⁾. The recognition of a right to a clean and healthy environment as a group right would be of little avail to preserve collective environmental interests, considering that, as it is, group rights are preserved essentially on an individual basis, that is in terms of individual interest of the members of the group, rather than on a genuine collective basis, in terms of the collective interest of the group⁽¹⁶³⁾. As to procedural human rights, they offer, as such, no guarantee as to weight attributed to environmental considerations⁽¹⁶⁴⁾.

Thirdly, human right mechanisms introduce some elements of accountability from the State to individuals under its jurisdiction, but provide no real remedy to individuals who are not under the source state jurisdiction with respect to the transboundary effects of the source state action. Unless of course it is agreed that human rights instruments bind States beyond their national borders⁽¹⁶⁵⁾.

4. Women Participation and Women Interests Clauses in Environmental Documents: Desirable or Regrettable Evolution?

As alluded to in the introduction of this Chapter, express reference to women's needs or/and interests (women clauses) have become an increasingly common feature of recent environmental documents. 1992 Agenda 21 is perhaps the most striking example: it devotes an entire Chapter to women alone⁽¹⁶⁶⁾, and contains as a whole over 140

(161) Waldron, *supra* n. 93, at 297-97.

(162) Waldron, *supra* n. 93, at 314-15.

(163) See *supra* n. 144. This is without mentioning the difficulty to identify the 'group' holder of a right to a clean environment, which could reveal even more complex than the identification of the individual holders. For the purpose of the distinction between collective and individual right, Van Boven defines the group as «une collectivité de personnes qui ont des caractéristiques particulières et distinctes et/ou qui se trouve dans une situation ou des conditions particulières». These special and distinct characteristics can be «d'ordre racial, ethnique, national, linguistique ou religieux», and the specific situation or particular conditions could result from «facteurs politiques, économiques, sociaux et culturels»; 'Critères de distinction des droits de l'homme', in Vasak (ed.), *Les dimensions internationales des droits de l'homme* (UNESCO, 1978), at 60.

(164) See *supra* 3/ii. Towards a More Effective Exploitation of Human Rights Mechanisms to Preserve Individual Environmental Interests.

(165) Chapman, 'Symposium Overview', Symposium on Earth Rights and Responsibilities: Human Rights and Environmental Protection, 18 *Yale JIL* (1993), 215, at 225; see however 1966 International Covenant on Civil and Political Rights, Art. 2(1); 1950 European Convention on Human Rights, Art. 1; 1969 American Convention on Human Rights, Art. 1(1); no such 'jurisdiction' or 'nationality' clause is contained in *African Charter on Human and Peoples' Rights*.

(166) Chapter 23.

references to women⁽¹⁶⁷⁾ both in relation to environmental and developmental issues⁽¹⁶⁸⁾.

Scholars have carefully avoided addressing the issue of the legal justification for 'women clauses' in international environmental law; the general analyses of the one or the other instruments containing a women clause remain remarkably cautious and superficial, if not completely silent on the issue⁽¹⁶⁹⁾. On the other hand, great focus is

(167) According to Bretherton, 'Gender and Environmental Change, Are Women the Key to Safeguarding the Planet?', in Vogler & Imber (eds.), *The Environment & International Relations* (Routledge, 1996), Chap. 6, at 100.

(168) Women are particularly referred to in relation to poverty eradication (see Paras. 3.2 to 3.9); change in consumption patterns (Para. 4.27); demography and population control (Paras 5.12, 5.16, 5.17, 5.21, 5.28, 5.33, 5.34, 5.37, 5.44 to 46, 5.48 to 5.53, 5.62); promotion and protection of human health (Paras. 6.8, 6.11, 6.13, 6.18, 6.21, 6.23, 6.24, 6.27, 6.29 to 31, 6.33); human settlement (Paras. 7.4, 7.16, 7.20, 7.26, 7.28, 7.30, 7.45, 7.51, 7.76, 7.77); decision-making process on social, economic and environmental issues (Paras. 8.5, 8.10, 8.25, 8.45, 8.49); management of land resources (Paras. 10-5, 10.10, 10.11, 10.16); deforestation (11.1, 11.3, 11.13, 11.18, 11.27); desertification and drought (Paras. 12.14, 12.24, 12.28, 12.37, 12.56 to 58); mountain ecosystems (Paras. 13.11, 13.16, 13.17, 13.21); agriculture and rural development (Paras. 14.14, 14.17, 14.18, 14.27, 14.81, 14.91); biodiversity (Paras. 15.4, 15.5); biotechnology (Paras. 16.13, 16.14); protection of seas and oceans (Paras. 17.15, 17.81, 17.93, 17.94); freshwater resources (Paras. 18.9, 18.12, 18.19, 18.22, 18.33, 18.34, 18.44, 18.45, 18.48, 18.50, 18.53, 18.54, 18.59, 18.62, 18.68, 18.76, 18.80); management of toxic chemicals (Para. 19.22), hazardous wastes (Paras. 20.20, 20.26 to 28), and solid wastes (Paras. 21.19, 21.25, 21.46). Women are also referred to in sections devoted to other major groups, namely children (Paras. 25.5, 25.8, 25.9, 25.14); indigenous people (Para. 26.9); local authorities (Para. 28.2); workers (Paras. 29.7); business and industry (Paras. 30.1, 30.17, 30.24); scientific and technological community (Para. 31.4); farmers (Paras. 32.2, 32.4 to 32.6, 32.8, 32.14). See also Paras. 33.8 (financial resources and mechanisms), 34.3 and 34.14 (transfer of environmentally sound technology and capacity building), 35.21 and 35.25 (science), 36.4, 36.5, 36.10, 36.13 (education and training), 37.5 (national mechanism and international cooperation for capacity-building in developing countries), 38.14 and 38.19 (international institutional arrangements), 38.25 and 38.42 (UNDP), and 40.8 and 40.11 (information for decision-making).

See also references made in 1992 Biodiversity Convention, 1992 Rio Declaration on Environment and Development, 1992 Forestry Principles, and 1994 Desertification Convention, *supra* n.3. No reference to women is made in 1995 IUCN Draft Covenant on Environment and Development, nor in 1986 WCED-EG Legal Principles for Environmental Protection and Development.

(169) See for instance Bekhechi, 'Une nouvelle étape dans le développement du droit international de l'environnement: La convention sur la désertification', 101 *RGDIP* (1997), 5; Burhenne-Guilmin & Casey-Lefkowitz, 'The Convention on Biological Diversity: A Hard Won Global Achievement', 3 *YbIEL* (1992), 43; Chandler, 'The Biodiversity Convention: Selected Issues of Interest to the International Lawyer', 4 *Colorado JIELP* (1993), 141; Kovar, 'A Short Guide to Rio Declaration', 4 *Colorado JIELP* (1993), 119; Panjabi, 'From Stockholm to Rio: A Comparison of the Declaratory Principles of International Environmental Law', 21 *Denver JILP* (1993), 215; Porras, 'The Rio Declaration: A New Basis for International Cooperation', in Sands (ed.), *Greening International Law* (Earthscan, 1993), Chap. 2; Yusuf, 'International Law and Sustainable Development: The Convention on Biological Diversity', 2 *African YbIL* (1994), 109. Handl tried very cautiously to reflect upon women clauses in environmental documents at the recent ILA/UK Conference on '*Transnational Environmental Litigation and International Perspective*', but confined his presentation to generalities, admitting subsequently his great perplexity with regard to the legal justification and implications of such clauses; 'Human Rights and the Environment', paper delivered at ILA British Branch, '*Transnational Environmental Litigation and International Perspective*', Spring Conference, Nottingham, 9-10 May 1997. An enlightening contribution generally to the issue of women's role in environment and development was made by Housman, 'The Muted Voice: The Role of Women in Sustainable Development', 4 *Georgetown IELR* (1992), 361, more particularly 373 *et sequ.*

often laid on *factual* evidence of the involvement of women in environment-related matters both at the national and international levels⁽¹⁷⁰⁾.

A series of detailed studies and surveys made since the mid 1970s⁽¹⁷¹⁾ show that a majority of women in developing countries assume most of the vital functions to assure the daily sustenance of the household and the community. These functions traditionally attributed to women, such as water⁽¹⁷²⁾ and fuelwood⁽¹⁷³⁾ collection, and subsistence

(170) Housman for instance, focused his article on US policy towards the empowerment of women in development, and did not try to provide legal justifications on women clauses in environmental law instruments, relying rather on the 'factual' relationship between women and the environment briefly described above in the main text. Likewise, Bretherton focuses on social facts and needs, and gender relations theory, without trying to identify the real message of the 147 clauses she has identified in 1992 Agenda 21; *ibid. supra* n. 167, Chap. 6; no further indication is given by Pevato, 'Women's Rights, the Environment and Agenda 21', 2 *Development* (1994), 17. Joyner & Little on the other hand, seem to attribute the reference to women in international environmental law to the emerging feminist perspective of international environmental law; 'It's Not Nice to Fool Mother Nature! The Mystique of Feminist Approach to International Environmental Law', 14 *Boston University ILJ* (1996), 223. Joyner & Little raise but fail to answer the central question whether 1992 Rio Declaration on Environment and Development, Princ. 20, «genuinely and sufficiently endorse[s] equal gender participation in 'sustainable development' ? or are these 'soft' legal principles mere rhetorical aspirations which male-dominated governments have little actual intention of achieving?»; *ibid.*, at 258.

(171) The first real comprehensive data desegregated by sex were collected to review and appraise the achievements of the United Nations Decade for Women (1975-1985), at the occasion of the 1985 Third World Conference on Women, held in Nairobi; the data collected have been since then regularly updated. A first document was published in 1985 by the Division for the Advancement of Women (at the time, a division of the Center for Social Development and Humanitarian Affairs), to appraise the role of women in development, the factors enhancing them or impede them; whilst the original document remained essentially descriptive, the subsequent updates are more analytical; *1989 World Survey on the Role of Women in Development* (UN, 1989) (hereafter, *1989 World Survey*). Two compendiums offering a detailed perspective on the status of women world-wide were also prepared by UN Department of International Economic and Social Affairs after the 1985 Third World Conference on Women, which both cover the period 1970-1990; *Compendium of Statistics and Indicators on the Situation of Women 1986*, Series K No. 5 (UN, 1989) (hereafter, *1986 Compendium on the Situation of Women*). *The World's Women 1970-1990, Trends and Statistics*, Series K No. 8 (UN, 1991) (hereafter, *The World's Women 1970-1990*). An updated version of the latter compendium was prepared for the 1995 Fourth World Conference on Women; *The World's Women 1995, Trends and Statistics*, Series K No. 12 (UN, 1995) (hereafter, *The World's Women 1995*). All the above studies disclose, with figures, the importance of women's contribution to social development, including the management of the environment, and provide more generally enlightening details on the status of women at the national and world-wide levels.

(172) A series of fragmentary data collected between 1970 and 1995 shows that rural women spend daily a median time of 0.6 hours (*viz.* 36 minutes) in the wet season for drawing and carrying water, and up to thrice that time during the dry season; *The World's Women 1995*, at 50, Chart 2.13. Whereas in Burkina Faso, Ivory Coast, Kenya, Nepal, or Pakistan for instance, women devote 'no more than' 5 hours weekly for water collection, women in what was Yemen Arab Republic, or Nigeria might need as much as 17 hours per week; in some part of Zimbabwe, in the dry season, the same task might require up to 57 hours each week. *The World's Women 1970-1990*, at 75.

(173) Women devote a median time of 1.5 hours per day to collect fuelwood; *The World's Women 1995*, at 55, Chart 2.15; *The World's Women 1970-1990*, at 75. Indian women bear the sole responsibility to collect wood for cooking, smoking, heating, and consecrate a weekly average of 7.5 hour to that activity; in those more deforested areas, like in some parts of Uttar Pradesh, they might need up to 5 hours every day. Nepalese and Bangladeshi women would need 2,5 hours per week, and those in Indonesia, Guatemala or Burkina Faso, 'only' one hour each week. Women are occasionally helped in that task by men, as for instance Tanzania. Small children and teenage girls are often engaged in both water and wood collection. WCED Report revealed that 70% of the population in developing countries rely on wood as

agriculture⁽¹⁷⁴⁾, involve a close interaction with, and dependence upon, the environment. A parallel reading of early and more recent data on women in developing States clearly reveals that the combined pressures of population increase and unsustainable exploitation of natural resources, most notably for cash crop production, make these daily activities more time consuming, and leave women, especially in rural areas, particularly vulnerable to further environmental degradation⁽¹⁷⁵⁾. An increase in the time percentage devoted to subsistence activities means a reduction in the time reserved for other essential, but maybe not vital, activities:

«To the extent that there is no possibility for substitution of women's labour in child care or subsistence agriculture, their time constraints in agricultural activities will reduce production and may also affect their children's health and education.»⁽¹⁷⁶⁾

Due to their roles in the society⁽¹⁷⁷⁾, the realisation of which depends on the quality of their natural environment, women are more aware than men of the necessity to

the major fuel source; *Our Common Future* (Oxford University Press, 1987), at 187.

(174) Subsistence agriculture, reserved for indigenous consumption, as opposed to modern, cash-crop, capital-intensive agriculture, for export trade; *The World's Women 1970-1990*, at 92.

(175) The majority of the women considered by the above surveys recognise more time spent 'now', and walking 'longer distances' than they used to 'before'; yet any precise point of reference is lacking. It has proved extremely difficult to put a year on 'then' and 'before', and to quantify the measure of the increase in the time spent on water and wood collection. An estimated 80% of women in 18 Asian countries are already seriously affected by fuelwood scarcity, 60% of rural women in 32 African countries, and 40% in Latin America and the Caribbean; *The World's Women 1995*, at 54, Chart 2.14. See also UNEP, *Poverty and the Environment*, Preparatory Report to the 1995 World Summit on Social Development, (UNEP, 1995), 94.

(176) *The World's Women 1995*, at 50; also *1989 World Survey*, at 98.

(177) And not necessarily, as a result of natural affinity, as the proponents of the ecofeminist movement tend to argue; Jackson, 'Doing What Comes Naturally? Women and Environment in Development', 21 *World Development* (1993), 1947. The term *écoféminisme* was first used in 1974 by the French feminist writer Françoise d'Aubonne «to call attention to women's potential to bring about an ecological revolution» to save the planet; Françoise d'Aubonne, *Le Féminisme ou la Mort* (Pierre Horay, 1974), 213 *et sequ.*, quoted after Warren, 'Introduction to the Special Issue on Ecological Feminism, 6 *Hypatia* (1991), 1. It has developed into a theoretical paradigm and a movement in the late 1970s, essentially on the inspiration of American and European feminists, inspired by grassroots women-led environmental activism both in the US (Gibbs *infra* n.184) and abroad (*infra* n. 188, 189, Chipko movement, and n. 193 and 194, Green Belt movement). Originally essentially a discourse of 'first world' feminists, ecofeminism has spread only recently to less developed countries' scholars, with authors like Shiva and Agarwal (India). Although Agarwal is, in fact a critic more than of a proponent of ecofeminist theory. Agarwal, 'The Gender and Environmental Debate: Lessons from India', 18(1) *Feminist Studies* (1992), 119.

As implied in its appellation, ecofeminism is inspired by both ecological concepts (such as the principle of interdependence of life on earth, and the need to respect diversity) and feminists concepts (like for instance the analysis of women's subordinated status as tied together with other sources of oppressions. Feminist Mies and ecologist Shiva's joint study illustrates perfectly well the cross-cutting nature of the movement(s); Mies & Shiva, *Ecofeminism* (Zed Books & Fernwood, 1993). On the mutual influence of ecology and feminism: Rosser, 'Eco-Feminism: Lessons from Feminism form Ecology', 14(3) *Women's Studies International Forum* (1991), 143.

protect and preserve natural resources⁽¹⁷⁸⁾. World-wide, women, motivated by food security, health, and ecological concerns, have been widely involved in movements for the preservation of the natural environment⁽¹⁷⁹⁾. West German women have been seriously committed to the European women's peace and anti-nuclear movements. The 'Peasant Women in the Whyll Movement'⁽¹⁸⁰⁾, set up to protest against the construction of a nuclear power plant at Whyll (South West Germany), was one of the first German anti-nuclear movement. Petra K. Kelly, co-founder of *Die Grünen*⁽¹⁸¹⁾ and a keen advocate of environmental and women's issues, personifies German women's commitment to peace and a safe environment⁽¹⁸²⁾.

In the USA, Rachel Carson's ground-breaking book on the effects of indiscriminate use of technological progress, and more particularly pesticides and other chemicals⁽¹⁸³⁾, is frequently quoted as an early demonstration of women's particular environmental awareness. Even more often referred to as an example of the concern of American women for environmental (and health) safety⁽¹⁸⁴⁾ is Lois Gibbs' campaign against the dumping of hazardous wastes in the late 1970s. Inspired by the article of a local reporter about buried chemicals and the potential health effects they could cause, Gibbs came to draw a link between the mysterious and alarming increase in health problems (blood diseases, cancer, birth defects and miscarriage) in her middle class community, and past activities at the site. It was eventually revealed that the previous owner of the site, a chemicals and plastics factory, had dumped more than twenty thousands of tons

(178) UNEP/PNUF, *Le Public et l'Environnement*, l'État de l'Environnement 1988, UNEP/GC.15/17/Add.1 (UNEP, 1988) at 27.

(179) Further references on the active involvement of women in environmental protection initiatives in Caldecott & Leland (eds.), *Reclaiming the Earth: Women Speak Out for Life on Earth* (The Women Press: 1983); Dankelman, & Davidson, *Women and the Environment in the Third World: Alliance for the Future* (Earthscan & IUCN, 1988), Chap. 3; Environment Liaison Centre International, *Women and the Environmental Crisis*, Forum '85 (ELCI, 1985), Chap. 6; Ghai & Vivian, *Grassroots Environmental Action, People's Participation in Sustainable Development* (Routledge, 1992). Rodda (ed.), *Women and the Environment* (Zed Books, 1991); Women's Environmental Network & War on Want, *Women, Environment and Development*, Seminar Report, March 7, 1989 (WEN, 1989).

(180) Mies & Shiva, *ibid. supra* n. 177, at 13-15; Gladitz, *Lieber Heute Aktiv als Morgen Radioaktiv* (Wagenbach, 1979).

(181) On the influence of women in (West) German's Greens, see Mellor, 'Green Politics: Ecofeminist, Ecofeminine, or Ecomasculine', 1(2) *Environmental Politics* (1992), 229, at 230-35. Although not to the same extent as in (West) Germany, women appear to have always been largely represented in the Swedish Green Party, the *Miljöpartiet*; see Peterson & Merchant, "'Peace with the Earth": Women and the Environmental Movement in Sweden', 9 *Women's Studies International Forum* (1986), 465.

(182) Kelly, *Um Hoffnung kämpfen: Gewaltfrei in eine grüne Zukunft* (Lamuv, 1983).

(183) Carson, *Silent Spring* (Hamish Hamilton, 1963; Penguin Books, 1991).

(184) Account of the facts in Patton-Hulce, *Environment and the Law: a Dictionary*, (ABC-CLIO, 1995), at 193; Gibbs, *Love Canal, My Story* (State University of New York, 1982); Mies & Shiva, *ibid. supra* n. 177, at 82 *et sequ.*

of toxic wastes over a period of 10 years (1942-52), before selling the property for the symbolic sum of US \$ 1 to a New York School district (1953). Housing development and schools had subsequently been built over the site, which became known as Love Canal. Housewives and mothers joined Gibbs' fight to raise and keep the issue alive, and created the 'Love Canal Parents Movement'⁽¹⁸⁵⁾. The perseverance of the movement led the New York Governor to declare a state of emergency in the region on August 2, 1978, and to order the evacuation of the whole contaminated area. Love Canal was declared a federal emergency area in 1980.

In Italy and Switzerland, women have led demonstrations against La Roche-Guivaudan in the aftermath of Seveso accident⁽¹⁸⁶⁾, and in Japan, women played a leading role in a collective boycott of 'commercial products' and in the promotion of organic and natural products, as well as the ecological farming techniques of local farmers⁽¹⁸⁷⁾.

Indian women have often been associated with the Chipko Andolan, born at Mandal in the Himalayas in March 1973⁽¹⁸⁸⁾, out of a spontaneous popular move to preserve Uttar Pradesh Himalayan forests from logging and auction⁽¹⁸⁹⁾. The movement has

(185) Later renamed Love Canal Homeowners' Association; Gibbs later co-founded the Citizen's Clearinghouse for Hazardous Wastes; Mies & Shiva, *ibid. supra* n. 177, at 85.

(186) Howard-Gordon (Transl.), 'Seveso is Everywhere', in Caldecott & Leland (eds.), *Reclaiming the Earth: Women Speak Out for Life on Earth* (The Women Press, 1983), Chap. 4.

(187) The Seikatsu Club Consumers' Cooperative, one of the earliest consumer liberation movement world-wide, was created in the early 1970s, after a large-scale food poisoning due to the contamination of fish with methyl mercury, discharged in the Minamata bay by a Chemical Factory over a period of thirty years; Ekins, *A New World Order* (Routledge, 1992), 131.

(188) March 1973 was not the very first dispute between indigenous people and governmental authorities regarding massive exploitation of Himalayan forests; such disputes have been recurrent, also under the colonial administration. However, the Mandal Forest action is traditionally considered as the starting point of the Chipko Andolan itself, as the Gandhian-style, peaceful, embracing-the-trunk technique was used for the very first time, to physically prevent tree cutting. Loosely translated, *Chipko* is the Hindi word for 'hug', and *Andolan* for 'movement'. For an overview of previous conflicts between lodgers and local people, see Weber, *Hugging the Trees, The Story of the Chipko Movement* (Viking, 1987), Chap. 1-3; Barthélemy, *Chipko: Sauver les Forêts de l'Himalaya* (L'Harmattan, 1982); Jain, 'Women and People's Ecological Movement; a Case Study of Women's Role in the Chipko Movement in Uttar Pradesh', 19(41) *Economic & Political Weekly* (1984), 1788.

(189) This first Chipko action led to green felling official ban in the Himalayan forests over a 15-year period (1980). Chipko actions are also reported to have inspired the 42th Amendment to the Indian Constitution (1977), which introduces, among other things, two environmental provisions, enjoining both State and citizens 'to endeavour to protect and improve the environment and safeguard the forests and wild-life of the country'; Weber, *ibid. supra* n. 188, at 51-52. Originally confined to Uttar Pradesh, Chipko has spread the message along Himalayan chain and to other parts of India, as well as to neighbouring countries (Nepal, Buthan...); Mies & Shiva, *ibid. supra* n. 177, Chap. 16. Some authors regard Chipko' actions as «historical landmarks because they have been fuelled by the ecological insights and political and moral strengths of women»; Shiva, *Staying Alive: Women, Ecology and Development* (Zed Books, 1989), at 67. It has yet to be underlined that, although widely supported by a large number of 'hill women', Chipko Andolan had not originated in women's initiative to preserve their vital environment, and that their subsequent support for the movement was originally motivated more by

broadened its field of activities beyond anti-tree-felling actions, to raise more global environmental awareness among local people. It has also intervened against chalk-mining operations performed in violation of Indian environmental law, and in 1983, Chipko Andolan went all the way up to the Supreme Court of India in order to obtain the closure of limestone mines in Dehra Dun (Uttar Pradesh) on conservation grounds (fissured limestone is essential for storing water)⁽¹⁹⁰⁾. The Narmada Bachao Andolan's campaign, launched to denounce the insufficiency of appropriate measures envisaged to tackle the social and environmental costs of Narmada Valley Project (Madhya Pradesh), was also strongly supported by women⁽¹⁹¹⁾. In the Philippines, in the mid 1970s, the project of a dam on Chico River, in Cordillera, had to be abandoned after indigenous women launched an active campaign against it. Women in the same region have also strongly, and so far successfully, opposed the resuming of mining activities by the biggest national mining company, the Benguet Corporation⁽¹⁹²⁾.

In Africa, best known is the Kenyan Green Belt Movement⁽¹⁹³⁾. The idea of tree-belt planting arose in the mid 1970s, within the more general context of a global initiative to

survival than altruistic concern. Women were originally not particularly active in Chipko interventions, and their involvement involved preserve the Reni Forest (1974), on the Indo-Tibetan border. On that occasion indeed, women had face alone the axemen and tie themselves to the trees to be cut, as all the men of the villages had been tactically tricked away by the lodgers to avoid any resistance. Other 'women-only actions' have taken place after the Reni Forest episode, such as in Gopeshwar, and Advani and Ranichauri forests; the two latter actions had been justified under individuals' constitutional duty to preserve the forests; Jackson, 'Doing What Comes Naturally ? Women and Environment in Development', 21 *World Development* (1993), 1947; Weber, *ibid. supra* n. 188, at 49 *et sequ.*

(190) Environment Liaison Centre International, *ibid. supra* n. 179, at 12; see also Anderson, 'Individual Rights to Environmental Protection in India', in Boyle & Anderson, Chap. 10, at 216 *et sequ.*

(191) Although in that case, attempts failed to have the acceptability of the project reviewed under environmental ground by Indian Courts. The movement's fears have subsequently revealed to be wholly justified, as resettlement and rehabilitation plan has been wholly unsatisfactory, as have been the measures to preserve threatened environmental resources; Ekins, *A New World Order* (Routledge, 1992), Chap. 5; Mies & Shiva, *ibid. supra* n. 177, at 306-7. Since the experience of Narmada project, the World Bank, the major funding agency of the project, requests 'a comprehensive, detailed and feasible' plan for the project affected persons before approving any loan for projects involving involuntary displacement; *supra* n. 60.

(192) Tauli-Corpuz, 'Indigenous Women, and Sustainable Development', in 4/92 - 1/93 *Women in Action, Women in Sustainable Development*, 56.

(193) A leading figure of the Green Belt movement, Wangari Muta Maathai, has assumed a central part in the realisation and success of the politics of afforestation. In parallel with her concrete tree planting actions, Maathai has also led the fight against massive deforestation in Kenya on a more political level, without being affiliated to any political party. In 1990, she strongly opposed the allotment of one of the few public parks in central Nairobi to the construction of a skyscrapers to provide offices to the presidential party. Although Maathai's fight ended up being dismissed by the domestic Court, it had a dissuasive effect on the foreign donors supposed to finance the project, which was eventually dropped, for lack of sufficient funding. She also denounced corruption and abuses in the sales of public plots to private societies 'close to the government'; Nzomo & Staudt, 'Man-Made Political Machinery in Kenya: Political Space for Women ?', in Nelson & Chowdhury (eds.), *Women and Politics Worldwide* (Yale University Press, 1994), 424.

improve the environmental quality in some urban areas of Nairobi⁽¹⁹⁴⁾. Conceived «to meet the needs of the communities by harnessing local capabilities, expertise and resources and engaging the community to be the main driving force»⁽¹⁹⁵⁾, the grassroots tree-planting campaign was focused on women from start⁽¹⁹⁶⁾ «because women are the largest users of wood»⁽¹⁹⁷⁾, to help them produce and maintain their major source of energy. In less than a decade (1974-1985), over six hundred tree nurseries have been created throughout Kenya, not to mention the numerous private mini green belts; on the whole, approximately seven millions of trees were planted over that period of time⁽¹⁹⁸⁾.

Examples of women's environmental 'activism' abound in Latin America; to mention only two of them: the Brazilian Ação Democrática Feminina Gaúcha (Democratic Feminist Action of Rio Grande do Sol) has been leading a constant fight against the maximisation-based export-oriented agricultural system imposed by the government and multilateral development banks, and has been trying to promote a more sustainable agriculture⁽¹⁹⁹⁾. Ecuador's Women have been particularly involved in the grassroots effort to save dwindling mangrove forests⁽²⁰⁰⁾.

The *factual* importance of women's involvement in/with the management of the environment alone does not mean that the contribution and needs of women are so particular that they must be specially reflected in international environmental strategies and legal frameworks; nor does it imply that women's special needs and interests would be better served if specially reflected in international environmental strategies and legal frameworks. Indeed, there seems to be a great deal of confusion in the doctrine on the legal justification, actual implications and importance to be attributed to women clauses.

For States, these clauses probably have essentially a political value, but are deprived of any substantial legal meaning. The absence of reservation, or interpretative statement with respect to women clauses, some of which are spelt out in detail, or indeed, to 1992 Agenda 21, Chap. 24, contrasts with States' extreme caution and numerous reservations with respect to other less 'peripheral' but equally controversial issues of Agenda 21⁽²⁰¹⁾,

(194) Maathai, *The Green Belt Movement* (ELCI, 1988), at 6.

(195) Maathai, *ibid. supra* n.194, at 9.

(196) Although men and children are also involved, the latter through schools' programmes.

(197) Maathai, *ibid. supra* n.194, at 13

(198) By 1993, these figures are reported to have more than doubled, and approximately over 50,000 people, mostly women, got involved the initiative; Katumba & Akute, 'Greening Takes Root', in 4/92-1/93 *Women in Action, Women in Sustainable Development* (1993), 49.

(199) Mies & Shiva, *ibid. supra* n. 177, at 88.

(200) Mies & Shiva, *ibid. supra* n. 177, at 3.

(201) Such as technology transfer and financial assistance; *supra* Chap. 5, Principle of Partnership.

and with regard to certain disputed provisions of the (hard law) 1979 Convention on the Elimination of All Forms of Discrimination against Women⁽²⁰²⁾.

A close look at the origins of women clauses in the various environmental instruments tend to suggest that such clauses are not any more than general public participation clauses the by-product of a dramatic evolution of international environmental law towards a more people and women-centred legal order. Nor are they a 'spontaneous' creation of the 1992 Conference on Environment and Development⁽²⁰³⁾.

In the same way as reference to the participation of people and individuals in general reflects the interrelatedness of social needs, human rights and the protection of the environment, women clauses reflect the evolution in the perception of women's roles, status and interests in society, and acknowledge the interrelation *inter alia* between the advancement of women, the promotion of development and the protection of the environment. In other words, women clauses in international environmental law constitute a 'cas d'application' (with some of its own specificity) of human rights clauses, and illustrate the necessity of considering human (women's) rights and environmental issues as interrelated but nonetheless clearly distinct issues.

i. Origins of Women Participation and Women Interests Clauses: Evolution in the Perception of Women's Role at the International Level: Recognition of Women's Roles in Economic Development

Women's needs and interests at the international level⁽²⁰⁴⁾ have originally been appraised exclusively in the light of women's reproductive role and their aspiration to legal equality. They were consequently addressed with a combination of welfare measures⁽²⁰⁵⁾ and the recognition of 'women's' human rights⁽²⁰⁶⁾. A substantial shift in

(202) On which see Clark, 'The Vienna Convention Reservations Regime and the Convention on Discrimination Against Women', 85 *AJIL* (1991), 281. It is interesting to note in that context that the 1979 Convention on the Elimination of All Forms of Discrimination against Women refers nowhere to women's special relationship to the environment.

(203) The first references to women in environmental documents date back to the process leading to the 1992 Conference.

(204) And to a certain extent, at the national level, yet with considerable discrepancies among the various States and cultures. All the United Nations documents and instruments referred below in relations to women are reproduced in *The United Nations and the Advancement of Women 1945-1995*, The United Nations Blue Books Series, Vol. VI (Department of Public Information, United Nations, 1995), unless explicitly indicated otherwise.

(205) Such as measures to improve health, family planning and nutrition, or to promote education and the acquisition of home-based appropriate technologies to enhance women's traditional skills; Moser, 'Gender planning in the Third World: Meeting Practical and Strategic Needs', 17 *World Development* (1989), 1799. A particularly explicit example of the 'welfare' approach to women's need is offered by A UNGA A/Res./1920 (XVIII), 5 December 1963, on Participation of Women in National Social and

the perception of women's roles and status has taken place over the course of the United Nations Decade for Women 1976-1985⁽²⁰⁷⁾, with the international recognition of women's active role *inter alia* in economic development⁽²⁰⁸⁾.

The major impact of recognition of women's economic role was the reorientation of the strategy for the advancement of women away from the classic welfare approach toward an approach based on empowerment⁽²⁰⁹⁾. Another essential but less mentioned

Economic Development. Despite its title, the Resolution is focused on women's social role, and affirms «the importance [a] participation at all levels of social and economic development by means of appropriate programmes in the economic and social fields, including in the fields of education, vocational training, eradication of illiteracy, nutrition, public health, public administration, housing, social welfare, and urban and rural development»; see also 1969 Declaration on Social Progress, focused on the reproductive role of women.

(206) The Sub Commission on the Status of Women, was created in 1946, and promoted almost immediately to a full commission, and vested with the overall mandate to «submit proposals, recommendations and reports to the Commission on Human Rights regarding the status of women»; see ECOSOC Resolution establishing the Commission on Human Rights and the Sub Commission on the Status of Women, E/Res/5(I), 16 February 1946, and ECOSOC Resolution establishing the Commission on the Status of Women, E/Res/2/11, 21 June 1946. The Commission on the Status of Women's prime concern was originally the equal status of women before the law, as illustrated by the drafting of the 1952 Convention on the Political Rights, and of the 1979 Women of the Convention on the Elimination of all forms of Discrimination against Women. The First World Conference on Women, held in Mexico in 1975, was also primarily concerned with women's welfare and equality, although the Conference Agenda (see Paras. 8, 9, 22), and indeed the Declaration of Mexico on the Equality of Women and Their Contribution to Development and Peace, already reflects a change in the perspective of women's role, and related needs and interests, in society. The Conference Agenda was once described as «a shopping list of desirable changes in the status of women», the implementation of which is left exclusively to the piecemeal action of individual States; Maguire, *Women in Development, an Alternative Analysis*, mimeo (Center for International Education, University of Massachusetts, 1989), 12. And indeed, the largely rhetorical tone of the Agenda has seriously undermined its whole credibility and affected its actual impact on women.

More generally, the focus on equality was strongly criticised by most second and third world women who, for different reasons, felt less concerned by what they considered to be typically capitalist society women's interest; Goetz, 'Feminism and the Claim to Know', in Grant & Newland (eds.), *Gender & International Relations* (Open University Press, 1991), Chap. 9.

(207) The Decade was proclaimed by the United Nations General Assembly only months after the 1975 First World Conference on Women; see UNGA A/Res./3520 (XXX), 15 December 1975, on the World Conference on the International Women's Year.

(208) Boserup's *Woman's Role in Economic Development* (St Martin's Press, 1970; new edn: Earthscan Publications, 1989) constitutes one of the earliest comprehensive study that highlights both the importance of women's contribution -mostly Third World women- to agricultural economy, and the marginalisation of women in modernising agricultural societies. Boserup's study paved the way for an abundant literature on women and development. Extensive references in Townsend, *Women in Developing Countries: a Selected Bibliography for Development Organisations*, Development Bibliographies I (Institute of Development Studies, 1988); White, *Women in Development: An Annotated Bibliography for the World Bank* (Overseas Development Council, 1976); African Training & Research Center for Women, *African Women in Development: Annotated Bibliography*, Bibliographic Series No. 11/1991 (United Nations Economic Commission for Africa, 1991); United Nations Economic and Social Commission for Asia and the Pacific, *Annotated Bibliography on Women in Development in Asia and the Pacific* (ESCAP, 1986). See also World Bank, *Recognizing the 'Invisible' Women in Development: The World Bank Experience* (World Bank, 1979).

(209) See UNGA A/Res./3010 (XXVII), 18 December 1972, proclaiming 1975 International Women's Year, which already pays some tribute to the part of women in the development process; UNGA

effect was the emergence of women's interests and women participation clauses in development agendas and strategies⁽²¹⁰⁾, and a multiplication of 'women in development' offices in development agencies⁽²¹¹⁾. In sum, women clauses in

A/Res./3020 (XXX), 15 December 1975, on the World Conference of the International Women's Year. Since 1975, the General Assembly has regularly adopted a Resolution on the integration of women in development process; see for instance UNGA A/Res./3505 (XXX), 15 December 1975, on Integration of Women in the Development Process; UNGA A/Res./31/175, 21 December 1976, on Effective Mobilization of Women in Development; UNGA A/Res./33/200, 29 January 1978, on Effective Mobilization and Integration of Women in Development; UNGA A/Res./34/204, 19 December 1979, *ibid.*; UNGA A/Res./35/78, 5 December 1980, *ibid.*

(210) No reference to women is made in the 1961 Strategy for the First Development Decade, as women's participation in the development process was not clearly established yet. 1970 Strategy for the Second Development Decade inaugurated the movement and cautiously stated that «the full integration of women in the total development effort *should be encouraged*» Para. 18(h) (emphasis added); the 1980 Strategy for the Third Development Decade, is more assertive, urging all States «to pursue the objective of securing women's equal participation both as agents and as beneficiaries in all sectors and at all levels of the development process», Para. 51; see also Paras. 8, 95, 122 and 168; 1990 Strategy for the Fourth Development Decade, Paras. 76, 83 and 95. No explicit reference to women could be traced in the 1974 NIEO Declaration and Programme of Action, the 1975 Economic Charter, and the 1975 Resolution on Development and International Economic Cooperation, all essentially focused of inter-State equity, despite suggestions in that sense by Ahooja Patel, 'Women, Technology and Development', 14 *Economic & Political Weekly* (1979), 1549, at 1550.

In the World Bank, the first comprehensive operational policy statement on women (in that case, gender) and development was made only in 1994, although the Bank had already integrated gender consideration in most of its country projects since the late 1980s; see further Collier, *Women in Development: Defining the Issues*, Working Paper (World Bank, 1988); World Bank, *Enhancing Women's Participation in Economic Development*, A World Bank Policy Paper (World Bank, 1994).

Likewise, most donors States introduced an express reference to women's needs and interests on their agenda of foreign assistance. The US was the first State to put gender concern on its foreign assistance agenda, after an active lobbying campaign of women's groups in Congress, with the 1973 Amendment to US Foreign Assistance Act. Under the so-called Percy Amendment 1961 (also known as the Women in Development Directive), US development assistance *must* help 'integrate women into the national economies of foreign countries, thus improving their status and assisting the total development effort'; 1973 Amendment to US Foreign Assistance Act, codified at 22 USC 2151K, Sect. 113, With the exception of Sweden that introduced women on its development agenda even before the US, in 1972, the majority of other donor States did so after 1975 First World Conference on Women (Norway, 1975; Australia, 1976; Germany and UK, 1978) or 1980 Second World Conference on Women (The Netherlands, Finland, 1980; New Zealand and Belgium, 1981; EEC, 1982; Switzerland, 1983; Canada, 1984), and even more after the 1985 Third World Conferences on Women (Italy, 1985; Ireland, 1986; Japan, Denmark and Austria, 1987; Spain, 1990; France, 1992; Portugal, 1993); see Jahan, *Assessment of Policies and Organizational Measures in Women in Development Adopted by DAC Member Countries*, Theme 2 of the Assessment of WID Policies and Programs of DAC Members (Directorate for Development Cooperation and Humanitarian Aid, Switzerland, and United States Agency For International Development, November 1994), Table 1, and more detailed review of the concrete measure taken in Table in Annex. In 1983, OECD laid the foundation for the integration of women in mainstream development agendas of the members of its development assistance committee (DAC), with its Guiding Principles to Aid Agencies for Supporting the Role of Women in Development; the Guiding Principles were reviewed in September 1989; W.8831D/Arch.1940D; see further Weckes-Vagliani, *The Integration of Women in Development Projects* (Development Centre Papers, OECD, 1985).

(211) The majority of States and entities referred above set up a special office or bureau in the development agencies to ensure the integration of women in their development projects; hence for instance, USAID's Office of Women in Development, set up in 1974; a Women in Development office within the US Bureau for Research and Development is responsible for report to US Congress on the progress of women in development policies, and serve as a focal point for technical assistance and research on gender issues. See also Sweden's Gender Office; Norway's Unit for Women in Development;

international and national development agendas and related developments find their base in documents concerned with the *advancement of women*, and not in general documents concerned with *economic development per se*. They have been developed and elaborated upon *via* documents concerned with the advancement of women, and most importantly the 1985 Nairobi Forward Looking Strategies for the Advancement of Women⁽²¹²⁾. The

Australia's Women in Development Coordination Group; Germany's Division for Women, Family and Youth; The Netherlands's Special Programme for Women in Development; Belgium's Unit for the Promotion of Women; Canada's Women in Development Directorate; Italy's Women in Development Bureau; Japan's Headquarters for the Planning and Promoting Policies Related to Women. In Portugal, the responsibility for implementing and co-ordinating women in development policy lies with the Cabinet of the State Secretary for Cooperation, and in the UK (before the change of Government in 1997), with the Social Development Department. For the time being, France's women in development policy is co-ordinated only by 'part time people'. No special organisational structure was set up, apart from workings groups, in EC, Denmark, Finland, Austria, Spain, New Zealand. A minority of countries, like Ireland and Switzerland, have not even a working group devoted to women in development; Jahan, *Assessment of Policies and Organizational Measures in Women in Development Adopted by DAC Member Countries*, Theme 2 on the Assessment of WID Policies and Programs of DAC Members (Directorate for Development Cooperation and Humanitarian Aid, Switzerland, and United States Agency For International Development, November 1994), Annex. Similar women's bureaux or offices were set up in a number of developing States essentially after the 1985 Third World Conferences on Women to implement the 1985 Forward Looking Strategies or the Advancement of Women agreed at the Conference; but as a whole, their efficiency has been seriously affected for two sets of reasons: (a) these bureaux have often been created within the ministries or departments of social and cultural affairs, rather than in the department of Agriculture (in the light of the number of women involved with agriculture in most developing States), economy, or development, and have been this way marginalised in the decision-making process; (b) women's offices generally experience a lack of funding to take any concrete, even small-scale action, or to hire well-trained personnel, as a consequence of their affiliation to notoriously under-funded ministries and departments; see in this respect the review of the progress of the women's bureaux in several Caribbean Countries: Gordon, *Ladies in Limbo, The Fate of Women's Bureaux, Six Case Studies from the Caribbean* (Commonwealth Secretariat, 1984), and updated *Ladies in Limbo Revisited*, Record of a Workshop held in Belize, 11-15 November 1985 (Commonwealth Secretariat, 1985). The same is true in fact, for a majority of the offices in developed countries, which are often marginalised from mainstream decision-making process, and appear at best a public relations exercise, at worst, a supplementary layer to the existing bureaucracy of development agencies; see Himmelstrand, 'Can an Aid Bureaucracy Empower Women?', in Staudt (ed.), *Women, International Development, and Politics, the Bureaucratic Mire* (Temple University Press, 1990), Chap. 4. More specifically on the very moderate impact of US Women in Development policy, see US General Accounting Office, *Foreign Assistance, US Has Made Slow Progress in Involving Women in Development*, Report to Congressional Requesters, GAO/NSIAD-94-16 (USGAO, Washington, D.C., 1993). A number of WID offices, most notably in the Nordic countries, have been particularly active.

At the international level, UNDP set up Women In Development focal points in 1976, promoted to a full Division for Women in Development in 1987; UNDP was confirmed in its function of 'promoting and strengthening the role and involvement of women, youth and other major groups in recipient countries in the implementation of Agenda 21'; 1992 Agenda 21, Para. 38.25. Since 1984, UNDP counts the UN Fund for the Development of Women (UNIFEM) among its associated (but autonomous) funds; see UNGA Res. A/39/125, 14 December 1984. The World Bank established a special division on Women in Development in 1987, within the Department of Population and human Resources of the Bank's Policy, Planning and Research Complex; World Bank, *Annual Report-Fiscal Year 1989* (World Bank, 1989), at 58 *et sequ*. For a more general assessment of the effort of various agencies to integrate women and gender issues into their activities, see Razavi & Miller, *Gender Mainstreaming: A study of Efforts by UNDP, the World Bank and the ILO to Institutionalize Gender Issues*, Occasional Paper 4 (UNRISD, 1995).

(212) More particularly Paras. 93-271; a system-wide medium-term plan for women and development for the period 1990-1995, E/1987/52, 7 April 1987, was endorsed by ECOSOC, that translate the relevant aspects of the 1985 Nairobi Forward Looking Strategies for the Advancement of Women in a consistent

same clauses were only superficially 'operationalised' by development agencies, to *add* more than *integrate* women in mainstream development projects *via* general guidelines and checklists.

ii. Women and the Environment

Likewise, the emergence of clauses referring to women in environmental instruments and agendas can be attributed to the increasing recognition of the close interrelation between the status and advancement of women and the preservation of the environment, within the general context of the advancement of women. In 1986, the UN Secretariat for the Advancement of Women designated the United Nations Environment Programme, the institutional output of the 'gender-neutral' 1972 Stockholm Conference on the Human Environment, as the lead agency on women and environment⁽²¹³⁾. In some ways, the choice of UNEP, the environmental consciousness of the whole UN system, as the focal point for women was an assurance of a valuable source of support from *inside* the United Nations.

The original terms of UNEP's mandate was to «safeguard and enhance the human environment for the benefit of present and future generations of Man»⁽²¹⁴⁾. The institution was thus not concerned with the protection of the environment in its purest and most disinterested form, but as an element «essential to [man's] well-being and to the enjoyment of basic human rights...»⁽²¹⁵⁾. UNEP's Governing Council had made it clear at its very first session, that the quality of life -not the protection of the environment- ought to be the primary concern of the programme⁽²¹⁶⁾. No particular attention was paid, however, to women's specific situation and contribution, either at Stockholm Conference⁽²¹⁷⁾, or in UNEP's founding Resolution⁽²¹⁸⁾.

and efficient way and to provide a framework the UN system-wide implementation of the strategy; a system-wide medium-term plan for women and development for the period 1996-2001 was by ECOSOC E/Res/1993/16; neither documents is reproduced in *The United Nations and the Advancement of Women 1945-1995*.

(213) Referred after Braidotti, *et al* (eds.), *Women, the Environment and Sustainable Development: Towards Theoretical Synthesis* (Instraw & Zed Books, 1994), at 87; Dankelman & Davidson, *Women and the Environment in the Third World: Alliance for the Future*, (Earthscan & IUCN, 1988), at 164.

(214) See A/Res/2997 (XXVII), 15 December 1972, Institutional and Financial Arrangements for International Environmental Cooperation, preambular Para. 1.

(215) Stockholm Declaration of the United Nations Conference on the Human Environment, Para. 1 *in fine*.

(216) UNEP, Report of the Governing Council on the work of its first session, 12-22 June 1973, GAOR, 28th Session, Suppl. No. 25 (A/9625), Annex I, Decision 1(I), Sect. III, Para. 3; the decision was subsequently endorsed by ECOSOC, E/Res/1820 (LV), 9 August 1973, and UNGA, A/Res/3131 (XXVIII), 13 December 1973.

(217) No reference is made to women in 1972 Stockholm Declaration on and Action Plan for the Human

UNEP developed a certain sensitivity about the role and importance of women in the protection of the environment essentially during the preparation stage of 1985 Third World Conference on Women⁽²¹⁹⁾. In a speech delivered at the outset of the Conference, Mostafa Tolba called upon all women to join the environmental effort: «I look to you, women from all walks of life, to join us in defining and, most crucially, redirecting the course of development to prevent further environmental catastrophes»⁽²²⁰⁾. An outreach programme on Women and the Environment was set up in 1984, to raise awareness and mobilise women's participation in environmental management⁽²²¹⁾.

Gender issues had been channelled inside the organisation and integrated in UNEP's internal and external policy through a series of formal and informal working groups on women, which eventually lead to the appointment of the first focal point for women's issues within the agency⁽²²²⁾. A group of seventeen women was also convened from around the world, all involved in environmental protection and management in their own countries as ministers, parliamentarians, or senior government officials. The role of this group, initially called the Committee of Convenors⁽²²³⁾, was essentially instrumental; it

Environment. And it is but a coincidence that the General Assembly decided in 1972 to dedicate the decade 1976-1985 to women.

(218) UNGA, A/Res/2997 (XXVII), 15 December 1972, *ibid. supra* n. 214.

(219) On UNEP activities on gender issues, *see generally*: 1992 Annual Report of the Executive Director, *Twenty Years since Stockholm* (UNEP, 1993), 57; UNEP, 'Background Paper on UNEP's Work in Gender and Environment', 1995; UNEP, 'Implementation of the Nairobi Forward-looking Strategies for the Advancement of Women', Report of the Branch for the Advancement of Women, Center for Social Development and Humanitarian Affairs, 27 May 1987.

(220) Excerpts from 'An Alliance with Nature - Women and the Earth's Traditions, Statement to the World Conference to Review and Appraise the Achievements of the United Nation Decade for Women, Equality, Development and Peace, Nairobi, July 1985.

(221) UNEP, 1992 Annual Report of the Executive Director, *Twenty Years since Stockholm* (UNEP, 1993), at 57.

(222) UNEP, 'Implementation of the Nairobi Forward-looking Strategies for the Advancement of Women', Report of the Branch for the Advancement of Women, Center for Social Development and Humanitarian Affairs, 27 May 1987.

(223) After the 1985 Nairobi Third World Conference on Women, UNEP Committee of Convenors was established as a standing committee of UNEP, and renamed the Senior Women's Advisory Group on Sustainable Development. The twenty-women strong group has been actively acting as voluntary advocates for women and their crucial role in key sectors of the environment, such as food production, preservation of biodiversity, wastes disposal, protection of forests at national and international levels; more generally, UNEP Senior Women's Advisory Group on Sustainable Development's mandate consisted in advising the UNEP Executive Director on means and strategies to integrate women into all sectors and at all stages of UNEP plans and policies. A mechanism internal to UNEP, was also set up to enhance the effort of the Programme in the field of women and the environment; UNEP Internal Task Force on Women was created at the occasion of the 1985 Third World Conference on Women (held in Nairobi, where UNEP is headquartered), and consolidated and renamed Ad Hoc Group on the Advancement of Women in 1987. This institutional arrangement was altogether modified in the run up to 1995 Fourth World Conference on Women, and a new Gender Issue Board and Gender Focal Point set

was, among other things, to structure the input of UNEP at the 1985 Third World Conference on Women⁽²²⁴⁾, and lobby for the passing of a resolution calling for women to support sound environmental practices⁽²²⁵⁾. The Committee of Convenors played a decisive role *inter alia* in the adoption of the 'environmental provisions' of the 1985 Nairobi Forward Looking Strategy for the Advancement of Women⁽²²⁶⁾. Another source of influence was the international workshop on Women and the Environmental Crisis, convened in Nairobi, concurrently with the 1985 Third World Conference on Women⁽²²⁷⁾. The workshop gathered women from around the world involved in environmental actions, and relied on case studies to identify the needs of women with regards to the various interrelated dimensions of environmental crisis.

The first real initiative to integrate women's environmental and developmental concerns into the process leading to the 1992 United Nations Conference on Environment and Development was taken with the 1991 Symposium 'Women and Children First'⁽²²⁸⁾, convened to examine the impact of poverty and environmental degradation on children and women. Three months after the Symposium was held, a decision was taken at UNCED Third Preparatory Committee meeting, requesting UNCED Secretary-General 'to ensure that women's critical economic, social and environmental contributions to sustainable development be addressed at the Conference as a distinct, cross-cutting issue'⁽²²⁹⁾.

up.

(224) In its background paper for the 1985 Third World Conference on Women, UNEP reiterates the call for women «to join in defining and redirecting the course of development to prevent further environmental catastrophes»; UNEP, *Sustainable Development and Peace* (UNEP, 1985), at 11.

(225) See UN (draft) Resolution on women and the environment, proposed at the 1985 Third World Conference on Women, urging women «to be more conscious of the crucial role they play in environmental and natural resources». The draft also recommends that «in addition to economic criteria for evaluation of projects, societal benefits must also be included, specifically assessment of the participation of and impact upon women»; Document A/CONF.116/C.1/L.71, Paras. 1 and 5; the draft Resolution is annexed to the *Report of the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace*, Nairobi, 15-26 July 1985, UN/A/CONF.116/25/Rev.1, at 222. No further action was taken by the Conference on that Resolution. No particular mention was made of a link between women and the environment in the First (1975) and Second (1980) World Conferences on Women.

(226) It had a decisive influence upon IUCN/UNEP/WWF's updated strategy for a sustainable living. Whereas the original *World Conservation Strategy* (IUCN/UNEP/WWF, 1980) kept silent about women and the environment, *Caring for the Earth* (IUCN/UNEP/WWF, 1991) fully recognises and advocates the extending role of women in the community; see *Caring for the Earth*, at 23 and 59.

(227) See workshop report: Environment Liaison Centre International, *ibid. supra* n. 179.

(228) UNEP/UNFPA/UNICEF, Geneva, 27-30 May 1991, A/45/625 Annex; excerpts of the Workshop's conclusions in Robinson, (ed.), *Agenda 21 and the UNCED Proceedings* (Occana Publications, 1993), Vol. IV, at 992.

(229) Decision 3/5, August 1991.

No recommendation in that sense had been made at the two previous UNCED Preparatory Committee meetings, and no reference to women was contained in the resolution that convened the 1992 United Nations Conference on Environment and Development⁽²³⁰⁾. Following UNCED Preparatory Committee's decision, the first General Assembly Resolution dedicated to women, environment, population and sustainable development was passed without a vote; it recognises « the critical role that women, both in the informal and formal sectors, play in primary environmental care, (...) and achieving sustainable development»⁽²³¹⁾.

Two nearly simultaneous initiatives represented another major breakthrough in the process of integration of women's issues in 1992 Agenda 21 as a priority theme⁽²³²⁾. A Global Assembly of Women and the Environment was convened in Miami in November 1991 under the co-chairmanship of UNEP Senior Women's Advisory Group on Sustainable Development and WorldWIDE Network, an environmental NGO, to demonstrate and stimulate, through success stories, «women's capacities in environmental management in the areas water, waste and energy, and the potential of environmentally-friendly systems, products and technologies [as valuable contribution] to locally environmental management»⁽²³³⁾.

Material from the Global Assembly of Women and the Environment was expressly incorporated in a UN Secretary-General report documenting the linkages between the role and status of women and the environment, which was compiled in preparation for the 1992 Conference of Environment and Development⁽²³⁴⁾. The UN Secretary-General's conclusion conforms with the Global Assembly's message⁽²³⁵⁾:

(230) 1989 Resolution 44/228, on United Nations Conference on Environment and Development.

(231) A/Res/46/167, 19 December 1991, Women, Environment, Population and Sustainable Development, at Para. 3

(232) One could mention numerous initiatives in that sense, which had only a marginal impact; thus for instance, the Citizen's Action Plan for the 1990s (Agenda Ya Wanachi), drafted by the global NGO Conference 'Roots of the Future', convened by ELCI in Paris, in December 1991, wholly endorse the Women's Action Agenda 21; likewise, Planeta Femea, a Women's Conference within the NGOs forum of UNCED, has revealed disappointing in terms of "strategising" for the actual integration of women in development. The above information were obtained on the occasion of a three-month internship at UNDP Regional Office for Africa, Nairobi, March 1996-May 1996.

(233) Ofosu-Amaah & Philleo, *Women and the Environment: An Analytical Review of Success Stories*, (UNEP-WorldWIDE Network, 1992) at 3; excerpts of Global Assembly's conclusions in Robinson, (ed.), *Agenda 21 and the UNCED Proceedings* (Oceana Publications, 1993), Vol. IV, at 989.

(234) ECOSOC, Commission on the status of women, *Priority Themes - Development: Women and the Environment*, Report of the Secretary-General, E/CN.6/1992/9, 21 January 1992, at 3.

(235) In anticipation of the Global Assembly on Women and the Environment, an *ad hoc* Inter-Agency Working Group on Women, Environment and Development, co-chaired by UNEP and UNIFEM, was set to co-ordinate the actions between the relevant UN agencies (UNEP, UNDP, UNIFEM, UNICEF) and departments, and Bretton Wood institutions. The working group has prolonged its efforts after the Assembly, to assure that due consideration for the Assembly's outcome in the preparatory process to

«As a result of their role in society, women have interacted daily with natural ecosystems and have become skilled and knowledgeable environmental managers (...) The role of women in society makes them significant contributors to efforts to protect the environment, and the improvement of the status of women is vital to the enhancement of their contribution (...) On international agendas the status of women and the state of the environment have been treated as distinct issues although they are relevant and related to all other issues (...) Empowering women to deploy their skills and experience should become a major policy goal.»⁽²³⁶⁾

The second initiative of relevance in the process of elaboration of 1992 Agenda 21 Chapter 24 was the World Women's Congress for a Healthy Planet⁽²³⁷⁾ convened in Miami only days after the first event to structure women's input 'in the formulation of policies that will affect the future of our planet in next century'⁽²³⁸⁾.

«As caring women, we speak on behalf of those who could not be with us, the million of women who experience daily the violence of environmental degradation, poverty, and exploitation of their work and bodies. As long as Nature and women are abused by so-called "free market" ideology wrong concepts of "economic growth", there can be no environmental security.»⁽²³⁹⁾

Women's Action Agenda 21 was meant to reflect the work, ideas and values of the participants to the congress; it was built upon the recognition of the "interconnectedness of women, the environment, economic policies, development strategies, social justice and the survival of all species"⁽²⁴⁰⁾. Departing from previous attempts to isolate women and environment, the Agenda advocates a holistic (and sometimes utopian) model of a healthy planet, whereby environmental and women's issues are linked with other general issues such as military expenditures, foreign debts and trade, poverty, land rights, population and health biotechnology, nuclear and alternative energy, science and technology transfer, information and education. Presented to UNCED Secretary-General, Mr Strong as the contribution of the congress

UNCED. The group, now formally known as the UN and Financial Institutions Ad Hoc Working Group on Women, Environment and Development, pursues its collective effort to implement chapter 24 of Agenda 21; Ofosu-Amaah & Philleo, *Women and the Environment*, op.cit., 84.

⁽²³⁶⁾ *Priority Themes - Development: Women and the Environment*, Report of the Secretary-General, *supra* n. 234, Paras. 4, 5, 13 and 41.

⁽²³⁷⁾ Miami, November 8-12, 1991. The Congress has been organised by the American-based Women's Environment & Development Organization (WEDO), and chaired by Women's International Policy Action Committee (IPAC), a body of 54 women from 31 countries, specially set to co-ordinate and structure women's input into UNCED; see Braidotti *et al* (eds.), *Women, the Environment and Sustainable Development: Towards Theoretical Synthesis* (Instraw & Zed Books, 1994), at 91.

⁽²³⁸⁾ World Women's Congress for a Healthy Planet, Official Report (WEDO, 1992), at 8; see excerpts of Women's Action Agenda 21 in Robinson, (ed.), *Agenda 21 and the UNCED Proceedings* (Occana Publications, 1993), Vol. IV, at 1023.

⁽²³⁹⁾ Women's Action Agenda 21, reproduced in World Women's Congress for a Healthy Planet, Official Report, *supra* n. 238, Sect. 3, at 16.

⁽²⁴⁰⁾ Women's Action Agenda 21, *supra* n. 238, at 17.

to the preparatory process to the 1992 Conference on Environment and Development, Women's Action Agenda 21 has undoubtedly been a valuable source of inspiration in the drafting of 1992 Agenda 21 Chapter 24.

iii. Advancement of Women to Protect the Environment, or Protection of the Environment to Enhance the Advancement of Women?

We have tried to demonstrate that the roots of women clauses in international environmental document lie in the process of the advancement of women (*per se* a socio-economic issue), and reflect the changing conception of women's role in society. Earliest references to a link between women and environment were made in 'women documents', viz. in documents concerned with the advancement of women; they were only subsequently inserted as some sort of 'clauses de style' in environmental (and previously, in developmental) documents. These clauses have been developed and elaborated upon *via* documents concerned with the advancement of women⁽²⁴¹⁾, but have been only superficially 'operationalised' in the strict context of protection and management of the environment.

A particularly striking example is UNEP Gender Issue Focal Point's repeated attempts to elaborate gender impact assessment criteria to 'test' the gender sensitivity of UNEP plans, policies and projects⁽²⁴²⁾. The first two drafts articles, circulated only internally to UNEP, paraphrased in fact various 'women in development criteria' developed by various development agencies, to ensure that women are duly integrated in, and not adversely affected by, development projects. It was in any case extremely

(241) Apart from the main environmental provisions (Paras. 221-226), thirty other paragraphs in the 1985 Forward Looking Strategies embrace environmental considerations of concern to women, namely with regard to employment (Para. 139), health (Paras. 151, 162, 164), food, water and agriculture (Paras. 174-186), industry (Paras. 187, 189), trade and commercial services (Paras 194 *et sequ.*), science and technology (Paras. 197 *et sequ.*), energy (Paras. 215-217) and shelter (Paras. 206-210). The provisions of the 1985 Nairobi Forwards Looking Strategy for the Advancement of Women were largely reiterated in 1992 Agenda 21, Chap. 24, and in 1995 Beijing Platform for Action adopted by the Fourth World Conference on Women, Chap. IV, Sect. K. No real plan of action was set forth during the First (1975) and Second (1980) World Conferences on Women, to substantiate the declarations of good intent made by State representatives; the lack of comprehensive strategy was a major factor in the limited contribution of both Conferences to enhance women's status. Women and the environment was put as added to the list of priority themes to be dealt with by the Commission the status of women by an ECOSOC decision in 1990 already; E/1990/213.

(242) See UNEP Gender Impact Assessment Criterion (sic), Guidelines and Checklist, proposed by P. Murthi, Consultant, December 1995; another set of guidelines were developed previously by another Consultant, although it appeared that part of the Gender Focal Point was unaware of the first set, and the other part was unaware of the second set; only two persons were working at the focal point at the time. The second set did not substantially depart from the first one. Both were dangerously similar to the principles developed to integrate women in *development*, most notably OECD Guiding Principles on Women in Development, developed by OECD Development Assistance Committee, *supra* n. 210, and those elaborated by Overholt in the first Chapter of *Case Book on Gender Roles in Development Projects* (Kumarian, 1985).

difficult to see how such guidelines would in any way improve the efficiency of international environmental action. Whilst it was clear that the prime purpose lay in the promotion of women's role and their advancement. Far from providing helpful guidelines to 'operationalise' women's clauses in environmental documents, UNEP draft guidelines epitomise on the contrary the risk of confusion of the promotion of women and the protection of the environment⁽²⁴³⁾.

UNEP draft guidelines requested *inter alia* a detailed "baseline study" on the status of women and a comprehensive analysis of "key gender characteristic relations in the project area", that would contain data such as social, economic and legal status of women at the domestic and state level. It would also include a rubric on the division of labour within the family, within the group and within the state, with a special focus on the productive and reproductive roles of women and women's access to financial and natural resources.

The relevance of such information to environmental protection projects or policies is highly questionable. Quite clearly, more than an operational instrument to assist policy-makers to pay more attention to gender issues in the design of an environmental policy, project or convention, the guidelines would lead to a comprehensive study about the conditions of women in a given area, the compilation of which is the responsibility of bodies such as the Division for the Advancement of Women, or the Commission on the Status of Women, but not that of an environmental body such as UNEP. The advancement of women is a praiseworthy goal to which UNEP might incidentally participate; it is not, however, UNEP's main function⁽²⁴⁴⁾. Likewise, environmental law and policy incidentally contribute to the advancement of women, but this does not mean that the advancement of women is a 'new' objective of environmental law and policy.

Women clauses, *inter alia* in environmental law documents, could represent a victory of the cause of women on the international level, a mark of credibility and of importance. It is contended here that such clauses, and the confusion surrounding them, are in fact harmful both to the advancement of women and to the protection of the

(243) Another illustration is probably offered by 1992 Agenda 21, Chap. 24, which has more of a 'mini-agenda' for the advancement of women, than of a section of an agenda for the promotion of development and protection of the environment. It is interesting to note for instance, that the Chapter urges States to ratify 'all relevant conventions pertaining to women» whilst no reference is made to the ratification of environmental documents; Para. 24.4. More generally, there is clearly an unnecessary repetition between 1995 Beijing Platform for Action adopted by the Fourth World Conference on Women, Chap. IV, Sect. K, which can be legitimately considered as restating the relevant provisions of the 1985 Nairobi Forwards Looking Strategy for the Advancement of Women, *supra* n. 241, and 1992 Agenda 21, Chap. 24.

(244) The above comments on UNEP gender impact assessment criteria, and more generally on UNEP's activities on women draw from the author's experience during a three-month internship at UNEP Gender Issue Focal Point, Nairobi, December 1995-February 1996.

environment. They convey a simplistic and over-reductive conception of two related issues, *viz.* the advancement of women and the protection of the environment, and entail a serious risk to trigger overlapping efforts from the various competent bodies. On the other hand, if clarified in their content and properly interpreted, women clauses in environmental law documents could play an extremely important pivotal role, and assure proper co-ordination and compatibility between advancement of women and protection of the environment.

5. Conclusions: Satisfaction of Human Rights, Advancement of Women, Promotion of Development, and Protection of the Environment: Related, Parallel but Distinct Processes

The now common references to individuals, groups, human rights or women (among others) in international environmental law represent a double-edged sword. On the one hand, the rapprochement of human and women rights, and environmental issues reflects appropriately the factual interrelation existing between them. The importance to consider duly this interrelatedness pertains both to the efficiency and the adequacy of environmental law itself. The resolution of contemporaneous environmental matters rests indeed upon environmental factors as much it does upon social and economic factors, which include the needs, interests and behaviour of individuals and groups of individuals, the eradication of poverty and the advancement of women.

Pushed to its extreme however, such association of issues could be counter-productive and undermine altogether human rights, advancement of women and environmental protection, by conveying an over-reductive conception of the issues at stake. The advancement of women is not only about sustainable development and the protection of the environment; conversely, the protection of the environment and more generally the promotion of sustainable development do not primarily or exclusively hinge upon women. Bretherton's perception of the issue is caricatured to the absurd, and makes her point difficult to believe as she affirms that

«[i]n the absence of solution [to the problem of lack of women's empowerment in a generally male-biased social and economic system], women's struggle to safeguard the planet will remain confined to clearing up men's messes.»⁽²⁴⁵⁾

Human rights law might incidentally contribute in a certain way to the protection of the environment, and the protection of the environment might incidentally contribute to the satisfaction of human rights. As seen, international human rights law, the law for the advancement of women and international environmental law overlap on certain issues, or

⁽²⁴⁵⁾ *Ibid. supra* n. 167, Chap. 6, at 114.

on certain aspects of certain issues. They remain nonetheless distinct laws, geared to (related but) distinct objectives and implemented by distinct authorities according to distinct parameters. To argue otherwise would be a clear misconception of the interrelation between human rights, economic and social development, and the preservation of the environment⁽²⁴⁶⁾.



⁽²⁴⁶⁾ In this respect, the experience of the 1975 First World Conference on Women and 1980 Second World Conference on Women should serve as a lesson when it comes to link women issues to other general (and more controversial) issues. Hence, whilst there was a general consensus on the necessity, in principle, to 'integrate women in development', the focus of the Conferences' debates did not lie on how to proceed to achieve such goal, but was indeed diverted to more 'political' and seriously controversial (and not directly relevant) issues unfortunately referred to in the course of the Conferences, and most notably the equation of zionism with racism (expectedly firmly opposed by US), the issue of apartheid and sanctions against South Africa (resisted *inter alia* by the UK), the non compensation for the nationalisation of foreign investment (resisted by US, FRG, UK, France, Netherlands), the right to seek development financial and technological assistance (resisted by most technologically advanced States and major donor countries), and some specific women-related issues culturally and strategically important (such as family planning, opposed by Arabic countries and the Vatican); see 1975 First World Conference on Women, Decision 29, on Women's Participation in the Strengthening of International Peace and Security and in the Struggle against Colonialism, Racism, Racial Discrimination and Foreign Domination, and Decision 15, on Family Planning; in *Report of the World Conference of the International Women's Year*, Mexico City, 19 June to 2 July 1975, E/CONF.66/34, at 87 *et sequ.*, and 107 *et sequ.* Similar decisions were passed at the 1980 Second World Conference on Women; *Report of the World Conference of the United Nations Decade for Women: Equality, Development and Peace*, Copenhagen, 14 to 30 July 1980, A/CONF.94/35, Decisions 1 and 11, at 60 *et sequ.* and 72 *et sequ.*; see also 1980 Second World Conference on Women Dec. 16, on an International Conference on Sanctions against South Africa, and Dec. 45, on Apartheid and women in South Africa and Namibia; Dec. 26, on the Right of all Countries to seek development Assistance from any and all Sources, free from Threats and Attacks.

CHAPTER SEVEN
EVALUATION OF SUSTAINABLE DEVELOPMENT AS A FRAMEWORK PRINCIPLE OF
INTERNATIONAL ENVIRONMENTAL LAW

1. <u>Introduction</u>	332
2. <u>Sustainable Development from the Perspective of International Environmental Law:</u>	
<u>Synthesis of the Research</u>	333
3. <u>Gabcikovo-Nagymaros Case : Judicial Consecration of Sustainable Development?</u>	337
5. <u>Concluding Remarks</u>	341

1. Introduction

The first ambition of this thesis was to elaborate a general picture of sustainable development from the restricted perspective of international environmental law, and to set the basis for its operationalisation in this area of the law. Such task proved impracticable considering (a) the open-texture of the expression of 'sustainable development' *per se*, and (b) the absence of generally agreed guiding elements that could inspire the identification of such picture⁽¹⁾.

Preference had therefore to be given to a more deductive approach, whereby the concrete meaning and the legal significance of sustainable development are inferred from the recent evolution of selected basic principles of environmental law commonly associated with sustainable development⁽²⁾.

To allow for a certain degree of comparison, each principle has been studied from its inception through its most recent development. More particular emphasis was put on the period contemporaneous with the 1992 Conference on Environment and

(1) Chap.1/1. Introduction.

(2) For a justification of the choice of the principles, see *supra* Chap. 1/2/i. Conceptual Framework, and Chap. 1/2/ii. Approach and Methodology.

Development, when references to sustainable development in international environmental law instruments became the rule rather than the exception⁽³⁾.

2. Sustainable Development from the Perspective of International Environmental Law: Synthesis of the Research

Overall, the contribution of this research is extremely circumscribed, not to say disappointing, insofar as the *revelation of innovative* distinctive features of sustainable development is concerned. No dramatic change has emerged from the evolution of the principles considered, which might be attributed to the influence of a *principe inspirateur* called sustainable development. Rather, the research denotes a *regular evolution* of the basic rules of international environmental law as a result of their adaptation to the continuous improvement in the understanding of their subject matters.

1) It was first noted that, whilst permanent sovereignty over natural resources has remained a constant factor of international environmental law⁽⁴⁾, its conception has changed considerably over the years. Originally exclusively contemplated in its geographical dimension, permanent sovereignty over natural resources has long been assimilated to a rule of coexistence and non-interference among States that is, to a territorial concept deprived of any particular environmental implications.

Over the past twenty-five years, however, it has evolved into a more functional principle that defines less the geographical extent and limits of States' sovereign prerogatives, and more the competence, functions and responsibilities inherent in sovereignty in relation to domestic and transboundary environmental resources. Such shift away from territoriality towards functionality came as a response to both the dramatic increase in cross-border and global environmental problems (or better understanding of the full geographical implications of *prima facie* purely domestic environmental problems), and to the realisation of the interrelatedness of various environmental issues. A growing number of environmental problems transcend political boundaries and are the common concern of several, or indeed of all, States.

2) It was further considered that the evolution of the principle of prevention epitomises a wider transformation of international environmental law from a passive law of allocation of natural resources and reactive law of reparation, into a more proactive

(3) Chap.1/3. Evolutionary Perspective of Sustainable Development and Chap.1/2. General Framework of Research; it must be born in mind that the expression 'sustainable development' is by no means a creation of the 1992 Conference on Environment and Development, but predated it as illustrated by sporadic references in earlier instruments; Chap.1/3. Evolutionary Perspective of Sustainable Development.

(4) *Supra* Chap. 2/3. The Principle of Permanent Sovereignty over Natural Resources: a Principle of Customary Law.

tool of protection of natural resources. It reflects a general recognition that (a) natural resources are not solely objects of exploitation, but are equally objects of protection, and that (b) the natural assimilative, self-regenerating and self-perpetuating capacity of ecosystems is not unlimited. The real development of the protective function of international environmental law thus coincides with the recognition of environmental limits.

The increase in complexity of 'modern' environmental pollution and the intensification of the actual and potential human impact on the environment, particularly over the past fifteen years, have demonstrated, with respect to certain critical environmental situations, the necessity to intervene and take environmental measures at an early stage, even where a degree of scientific uncertainty persists on the causal link between the object of environmental regulation and the subject of environmental protection (precautionary approach).

3) The third evolution considered is related to the development of the dimension *ratione temporis* of international environmental law, *via* intergenerational equity. A great majority of issues addressed in recent international environmental law, such as loss of biodiversity and forestry resources, ozone layer depletion and climate change transcend not only space but also time boundaries. They need to be contemplated and acted upon both in the light of their *present day* conditions, and in the intergenerational perspective of their *hypothetical future* evolution and impact.

4) The thesis also denoted a certain intensification in technical and economic co-operation between States in relation to environmental issues. It emerged that a number of new parameters for technical and financial co-operation have been formally enshrined into environmental conventions, in exchange for developing States' commitment to take appropriate measures to preserve certain environmental resources located within their national boundaries. The principle of common but differentiated responsibility, the principle of additionality and the principle of contingency of certain environmental obligations were more particularly considered⁽⁵⁾.

5) Particular attention was finally paid to the development of a 'participatory' environmental law, and to the proliferation of 'public participation', 'public interest' and human or women's rights clauses in international environmental law instruments⁽⁶⁾. A detailed analysis suggests that, from the perspective of international environmental law, such clauses, and more generally the so-called 'participatory dimension' of international

⁽⁵⁾ *Supra* Chap. 5/3. The Parameters for Global Co-operation.

⁽⁶⁾ Less consideration has been paid to the parallel multiplication of environmental clauses in human rights instruments.

environmental law, reflect the close interrelationship existing between environmental issues, and social and human rights matters.

The various principles have thus each evolved in an autonomous way, in different circumstances, to fulfil distinct objectives. Beyond these differences and peculiarities, however, a common trend, or general framework, stands out quite clearly, which one may call sustainable development.

This common framework can be expressed in four points:

- (1) As a premise, there is a due recognition and proper consideration of the interrelatedness of environmental issues and the natural interdependence of States;
- (2) There is also a general reorientation of international environmental law from a 'law of coexistence' into a 'law of co-operation'⁽⁷⁾, with the general tendency to depart from the synallagmatic structure of classic international law, to address more global and common concerns;
- (3) A general reorientation of international environmental law from a law of allocation of natural resources into a law of preservation and protection of these resources (paradoxical 'greening of international environmental law').
- (4) A shift from a fragmented approach towards a more holistic and integrated approach. Various environmental problems are increasingly addressed as part of a wider environmental context, and indeed as part of an even wider socio-economic context.

This latter feature evidences best the partiality of our research. We underlined in the introductory Chapter the paradox of isolating *one* dimension only of a notion which is essentially about the interrelation and integration of science, politics, economics and law, and, in law, of human rights law, economic law and environmental law. Such focus was justified as commanded by pure reason of manageability of the research⁽⁸⁾. This fundamental characteristic of sustainable development predominates the conclusion: sustainable development is not about environmental protection; it is not about human rights; it is not about economic development and fair international trade. Sustainable development is about a combination and co-ordination of all these objectives.

It was also underlined in the introduction that the conclusions reached in this research apply only to the environmental dimension of sustainable development viewed under the environmental law perspective, and would not necessarily apply by analogy to the other dimensions. Although it is probable that different conclusions would have been

⁽⁷⁾ See *supra* Chap. 5/1. Introduction.

⁽⁸⁾ See *supra* Chap. 1/2/ii. Approach and Methodology.

reached under a different perspective, the specific element of integration is, undoubtedly, common to all dimensions of sustainable development, whatever the perspective these dimensions are appraised from.

As for the rest, the four points listed above tend to confirm that sustainable development considered in the area of international *environmental* law has not the revolutionary status that some try to attribute it⁽⁹⁾; it is not about new rules, new principles, nor is it about new solutions. In fact, in certain respects⁽¹⁰⁾, sustainable development appears more as a reflection of the evolution of international environmental law, than it seems to be the trigger of such evolution. Sustainable development in sum, is not the by-product of a sudden *revolution* of international law in general and international environmental law in particular; it is the outcome of a constant *evolution* of these laws.

Sustainable development reorganises, and where necessary sets, the framework within which existing and emerging or future rules and principles of international environmental law are to be construed. To quote Dupuy, sustainable development represents a «matrice conceptuelle, définissant la perspective générale dans laquelle les principes déjà établis de bonne gestion de l'environnement doivent être restitués»⁽¹¹⁾. And indeed, sustainable development is most commonly referred to in the preambular

⁽⁹⁾ See for instance Hohmann, 'Environmental Implications of the Principle of Sustainable Development and their Realization in International Law', in Chowdhury *et al.* (eds.), *The Right to Development in International Law* (Martinus Nijhoff, 1992), Chap. 3.4; Hossain, 'Evolving Principles of Sustainable Development and Good Governance', in Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, 1995), Chap. 1; Hossain, 'Sustainable Development: A Normative Framework for Evolving a More Just and Humane International Economic Order', in Chowdhury *et al.* (eds.), *The Right to Development in International Law* (Martinus Nijhoff, 1992), Chap. 3.2; Jositsch, 'Das Konzept der nachhaltigen Entwicklung (Sustainable Development) im Völkerrecht und seine innerstaatliche Umsetzung', 11 *Umweltrecht in der Praxis* (1997), 93, at 114; Panjabi, 'From Stockholm to Rio: A Comparison of the Declaratory Principles of International Environmental Law', 21 *Denver JILP* (1993), 215; Singh, 'Sustainable Development as a Principle of International Law', in De Waart *et al.* (ed.), *International Law and Development* (Martinus Nijhoff, 1988), Chap. 1.1; see also Judge Weeramantry, quoted above. For a more moderate view, see Bekhechi, 'Le droit international à l'épreuve du développement durable', 6 *Hague YbIL* (1993), 59; Epiney & Scheyli, 'Le concept de développement durable en droit international public', 7 *Schweizerisches Zeitschrift für Internationales & Europäisches Recht* (1997), 247; Luff, 'An Overview of International Law of Sustainable Development and A Confrontation Between WTO Rules and Sustainable Development', 29 *RBDI* (1996), 90; Riedel, 'International Environmental Law - A Law to Serve the Public Interest? - An Analysis of the Scope of the Binding Effects of Basic Principles (Public Interest Norms)', in Delbrück (ed.), *New Trends in International Lawmaking - International 'Legislation' in the Public Interest* (Duncker & Humblot, 1997), 61.

⁽¹⁰⁾ See more particularly Chaps. 2, 3 and 5.

⁽¹¹⁾ Dupuy, 'Où en est le droit international de l'environnement à la fin du siècle?', 101 *RGDIP* (1997), 873, at 886.

part of international instruments which is purported to set the general framework, the spirit and the goal of the provisions it prefaces⁽¹²⁾.

3. Gabcikovo-Nagymaros Case : Judicial Consecration of Sustainable Development?

The opportunity to consider the operational character of sustainable development arose recently in the International Court of Justice, with the *Gabcikovo-Nagymaros* case⁽¹³⁾. In their respective pleadings to the Court, Hungary and Slovakia both contended that the principle of sustainable development 'as formulated in the Brundtland report, the Rio Declaration and Agenda 21' was 'applicable to the dispute'⁽¹⁴⁾.

The case arose from Hungary's decision to withdraw from a treaty with former Czechoslovakia relating to the joint construction and exploitation of a dam system over the Danube river, on the ground that the environmental impact of such project had not been sufficiently evaluated (plea of environmental necessity). The Slovak Federation, on the other hand, rejected Hungary's plea of environmental necessity as a sufficient ground to terminate the treaty in general⁽¹⁵⁾, and denied the existence of any such environmental necessity in this particular case.

This long-standing dispute has been widely commented upon in the doctrine⁽¹⁶⁾, with much speculation concerning the importance the ICJ would attribute to environmental

(12) See *supra* Chap. 1/2/iii. *Legal Framework*.

(13) We are indebted to Professor Alain Pellet and to his assistant, Céline Nègre, in Paris, for allowing us unlimited access to the entire oral and written pleadings for that case. For the sake of clarity, we shall refer to the various documents of the pleadings with the following abbreviations: CR = Verbatim record of the oral pleadings (uncorrected); H/M = Memorial of the Republic of Hungary; S/M = Memorial of the Slovak Republic; H/CM = Counter-Memorial of the Republic of Hungary; S/CM = Counter-Memorial of the Slovak Republic; H/R = Reply of the Republic of Hungary; S/R = Reply of the Slovak Republic; S/CR = Comments on Hungarian Reply submitted by the Slovak Republic.

(14) See H/R Vol. 1 § 1.45 and 1.47; S/CM § 9.53-9.50.

(15) See Special Agreement between Hungary and the Slovak Federation for Submission to the International Court of Justice of the Differences between them Concerning the *Gabcikovo-Nagymaros* Project, 32 *ILM* (1993), 1293; see also Prof. Pellet's pleading on the confusion underpinning the Hungarian's argumentation between the grounds for termination of a treaty and the grounds of exoneration of state responsibility, CR 97/9, p. 40 *et sequ.* and references contained therein.

(16) For a presentation of the factual elements and political dimension of the dispute, see Assetto, & Bruyninckx, 'Environment, Security and Social Conflict: Implications of the Gabcikovo-Nagymaros Controversy', in Blake *et al.* (eds.), *International Boundaries and Environmental Security: Frameworks for Regional Cooperation* (Kluwer Law International, 1997), Chap. 20; Galambos, 'Political Aspects of an Environmental Conflict: The Case of the Gabcikovo-Nagymaros Dam System', in Käkönen (ed.), *Perspectives on Environmental Conflict and International Relations* (Pinter, 1992), Chap. 6; Liska, 'Development of the Slovak-Hungarian Section of the Danube', in Blake *et al.* (eds.), *The Peaceful Management of Transboundary Resources* (Graham & Trotman/Martinus Nijhoff, 1995), Chap. 12. For a legal analysis of the environmental dimension, see Eckstein, 'Application of International Water Law to Transboundary Groundwater Resources, and the Slovak-Hungarian Dispute Over Gabcikovo-Nagymaros',

values. In many ways, the dispute constituted a genuine 'test case' for environmental law at the international level in general, and for some emerging environmental law principles in particular⁽¹⁷⁾. The parties, more particularly Hungary, resorted to novel arguments, most of them considered in this research in relation to sustainable development. It invoked for instance the principle of precaution «généralement reconnu par le droit international»⁽¹⁸⁾, the related obligation to prepare a serious environmental impact assessment study⁽¹⁹⁾, and the argument of intergenerational equity⁽²⁰⁾. It also relied upon more classic arguments such as the principle of equitable utilisation of shared natural resources⁽²¹⁾ and that of co-operation⁽²²⁾. Slovakia, on the other hand, did not deny the evolution of customary international environmental law in the past three decades and emergence of new environmental rules since the conclusion of the 1977 Czechoslovakia-Hungary Treaty Concerning the Construction and Operation of the *Gabcikovo-Nagymaros* System of Locks. It contented, however, that the general legal context had not so dramatically changed, most notably in terms of new international environmental rules, to justify a termination of the 1977 Treaty. It argued in fact that a great majority of the rules invoked by Hungary are «de simples propositions de normes dont on doit constater qu'elles sont tout juste en gestation» and hence not part of the *corpus juris* as such⁽²³⁾.

19 *Suffolk TLR* (1995), 67; Robert, 'L'affaire au projet Gabcikovo-Nagymaros (Hongrie/Slovaquie), un nouveau conflit en matière d'environnement devant la Cour internationale de justice ?', *XLVII Studia Diplomatica* (1994), 17; Williams, 'International Environmental Dispute Resolution: The Dispute Between Slovakia and Hungary Concerning Construction of the Gabcikovo and Nagymaros Dams', 19 *Columbia JEL* (1994), 1. More specifically on Hungary's perspective, see Nagy, 'Divert or Preserve the Danube? Answers 'in Concrete' - a Hungarian Perspective on the Gabcikovo-Nagymaros Dam Dispute', 5 *RECIEL* (1996), 138.

(17) See Eckstein, Robert and Williams, *supra* n. 16, and Sohnle, *infra* n. 38.

(18) CR 97/2 at p. 18 § 10 and p. 48 § 23; CR 97/12, p. 68 § 12; H/M §§ 6.46-6.69, 8.31; H/CM §§ 4.29, 6.14, 6.18, 7.30; H/R §§ 1.48, 1.51-1.58. The whole idea of precaution underpins Hungary's conception of the *rebus sic stantibus* doctrine and the notion of emergence of new environmental needs. Hungary takes the view that environmental damage need not be actually have occurred to justify invoking the fundamental change of circumstances doctrine, and held that «the appreciation of a genuine environmental risk can be sufficient to warrant termination, provided that the damage if it were to occur would be significant and not within the realms originally envisaged by the Parties»; Sands, CR 97/6, p. 16 § 57; H/M §§ 6.57 *et sequ.*; H/R §§ 1.41, 1.52, 1.53. See by contrast the opinion of Slovakia, CR 97/9, p. 30 *et sequ.*, and the opinion of the Court *infra* in the text.

(19) CR 97/2 at p. 29 § 27; M/M §§ 3.48, 3.71-3.72; H/R §§ 1.64 *et sequ.* See Frutcher on the standards to be applied in EIA studies: Ms Gorove, CR 97/3, p. 57 *et sequ.*

(20) Hungary invoked 'la responsabilité de la Hongrie et de la Tchécoslovaquie envers les générations présentes et futures'; Prof. Dupuy, CR 97/3, p. 77 § 2; H/M §§ 3.78-3.93.

(21) CR 97/2 at p. 49 § 26; H/M §§ 7.72-7.82.

(22) CR 97/2 at p. 49 § 25; H/M, §§ 6.70-6.75.

(23) Prof. Pellet, CR 97/10, p. 28; see also S/R, §§ 3.25 *et sequ.*; S/CR §§ 1.41 *et sequ.* and § 4 *et sequ.*

The ICJ acknowledged more than it genuinely endorsed the alleged 'new rules' of international environmental law. The Court was most notably cautious with regards to arguments such as intergenerational equity⁽²⁴⁾, which it referred to but did not expand upon, and the principle of precaution. With regards to the latter argument, the Court's narrow conception of an 'imminent peril' in the sense of a component element of a state of necessity is not particularly indicative of a 'precautionary approach'. In the view of the Court, a peril is imminent as soon as it is established, at the relevant point in time, that the realisation of that peril, however far off it might be, is not thereby any less *certain and inevitable.*»⁽²⁵⁾.

More generally, however, the judgement of the ICJ in the *Gabcikovo-Nagymaros* case illustrates the extreme complexity of the argument of sustainable development, and the related risk of adopting conflicting perspectives thereon. The following conclusion of the Slovak Representative after the first round of oral presentation expresses all too well the inherent difficulty of conciliating the various dimensions of sustainable development *in casu*:

«...en écoutant, il y a trois semaines, les plaidoiries de la Partie Hongroise, j'ai eu le sentiment que, d'une certaine manière, deux conceptions de l'environnement s'opposaient devant [la Cour]. La Slovaquie attache (...) autant d'importance que la Hongrie [à la protection de l'environnement], sinon plus; mais je pense aussi que nous avons de la protection de l'environnement une conception que je crois plus responsable, plus positive, et je dirais surtout plus 'humaniste' que la Hongrie. Ce qui importe à nos yeux, c'est la protection de l'environnement *humain*. Comme le dit avec force le premier principe de la déclaration de Rio de 1992: «Les êtres humains sont au centre des préoccupations relatives au développement durable. Ils ont le droit à une vie saine et en harmonie avec la nature». La protection contre les inondations, l'amélioration de l'irrigation et des conditions de navigation, la recherche d'une meilleure qualité des eaux de surface et souterraines participent évidemment à cet objectif, et par la réalisation conjointe du projet de *Gabcikovo-Nagymaros* les Parties auraient fortement contribué ensemble à sa mise en oeuvre, en même temps qu'elles auraient utilisé une source d'énergie propre et renouvelable dans l'intérêts des deux peuples, slovaques et hongrois.»⁽²⁶⁾.

Hungary adopted a rather narrow perspective of sustainable development, insisting more particularly on the environmental dimension of sustainable development⁽²⁷⁾. Slovakia, by contrast, relied on a broader understanding and exploited the economic,

(24) *Case concerning the Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, 37 ILM (1998), 67, at Para. 140; see also 35, Para. 53, and 58, Para. 112.

(25) *Case concerning the Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, 37 ILM (1998), 162, at Para. 54 (emphases added).

(26) CR 97/11, p. 55.

(27) H/R §§ 1.39 and 1.48.

social and environmental dimensions of the same argument⁽²⁸⁾. It was the task of the Court to reconcile those conflicting interests and by doing so, to give its own view of sustainable development.

To one learned scholar and sitting ICJ judge in that case, sustainable development constituted a 'principle crucial to the resolution of the case' and played 'an essential role in the Court's balancing the competing demands of environmental protection and development'⁽²⁹⁾. Judge Weeramantry regards sustainable development as more than a mere concept. In his view, it is 'a genuine principle with normative value', part of modern international law by reason of both 'its inescapable logical necessity', and its 'wide' and general acceptance by the global community⁽³⁰⁾. Apart from being a principle of modern international law, sustainable development is also 'one of the most ancient ideas in the human heritage'⁽³¹⁾.

In its final judgement, however, the Court, made only one very cautious express acknowledgement of sustainable development⁽³²⁾, worded in the following generic terms:

«[The] need to reconcile economic development with the protection of the environment is aptly expressed in the concept of sustainable development.»

No implicit or explicit recognition of the legal significance nor of the substantive meaning and normativity attributed to sustainable development can be found in the final judgement. The Court confined itself to acknowledging, in a very general way as it had already done on previous occasions, the importance of the protection and preservation of the environment⁽³³⁾, whilst cautiously avoiding further elaboration.

At the outset, it would seem fair to say that the Court approached the dispute essentially from a treaty law perspective, with some environmental considerations *added* more than genuinely *integrated* in its reasoning⁽³⁴⁾. After a closer look, however,

(28) CR 97/9, p. 29.

(29) Judge Weeramantry, *supra* n. 30, at 204.

(30) *Case concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, Judge Weeramantry (sep. op.), 37 *ILM* (1998), 162, at 204-207. See also Hungary's claim that 'international law in the field of sustainable development is sufficiently well established' to apply to the case; quoted by Judge Weeramantry, *ibid.*, at 205.

(31) *Supra* n. 30.

(32) *Case concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, 37 *ILM* (1998), 162, at Para. 140 *in fine*. Apart from Judge Weeramantry, none of the Judges appending a separate or dissenting opinion even mention sustainable development.

(33) *Legality of the Use by a State of Nuclear Weapons in Armed Conflict*, Advisory Opinion, *ICJ Rep.* 1996, 66, Para. 29; *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*, *ICJ Rep.* 1995, 288, at Para. 64.

(34) See in that sense Judge Herczegh's dissenting opinion, not yet reproduced in *ILM* but posted on the

it appears obvious that the Court's reasoning was not exclusively based upon the law of treaties, but was influenced by some other external 'factors'. On the one hand, the Court concludes (a) that Hungary has not lawfully departed from the 1977 Treaty, and that (b) that Slovakia is the legitimate successor of Czechoslovakia in that same treaty. The 1977 Treaty is consequently still binding upon the Treaty, and the principle of *pacta sunt servanda* would command both parties to fulfil their respective treaty obligations. Which means for Hungary the construction of the dam at Dunakiliti. Yet no such obligation is spelled out by the Court. On the contrary, the Court invites both States to 'look afresh at the effects of the environment of the operation of the *Gabcikovo* power plant' and that the various parts of the project which have already been built should be jointly operated⁽³⁵⁾. This conclusion, interpreted against the background of the oral and written pleadings, may be an implicit recognition that a strict application of the law of the treaties in that case, hence a full application of the 1977 Treaty, would entail unacceptable environmental consequences in the light of modern environmental standards and the general spirit of 'sustainable development'.

Albeit perhaps a step in the right direction, this recent decision of the ICJ in *Gabcikovo-Nagymaros* case testifies nonetheless of a certain quandary with regard to recent developments in the field of international environmental law, and most particularly with respect to sustainable development. It echoes the wider tendency prevailing in the doctrine⁽³⁶⁾ and in international environmental law instruments⁽³⁷⁾, to refer generically to sustainable development without attempting to elaborate on its legal significance, or even clarify its role and status⁽³⁸⁾.

5. Concluding Remarks

The use of the term 'sustainable development' in various fields as different as architecture and law, and in relation to many different issues such as health or natural resources management, in political, legal, economic, scientific or sociological fora, has

web @ <<http://www.icj-cij.org>>.

(35) *ICJ Rep. 1995*, 288, at Paras 140-141.

(36) Some scholars writing on sustainable development adopt a technique similar to that used here, and approach sustainable development through more specific principles of international environmental law. An even more widespread practice consists of 'illustrating' sustainable development with an essentially descriptive explanation of the outcome of the 1992 United Nation Conference on the Environment and development; see references *supra* Chap. 1, Introduction, n. 1.

(37) See references *supra* Chap. 1, Introduction, n. 1.

(38) This is also the conclusion taken by Sohnle, who appeared to have had extensive access to the Court's pleadings; 'Irruption du droit de l'environnement dans l'affaire de la C.I.J.: l'affaire Gabcikovo-Nagymaros', 102 *RGDIP* (1998), 885.

made it a term difficult to ignore. Everybody seems to talk about sustainable development, to write on sustainable development, to work towards sustainable development, to set agendas for sustainable development. And yet, it is astonishing to note that few are those who seem to know exactly what sustainable development is all about, and what it involves in practice, if anything.

To States, and to a large extent, to the private sector and local political groupings, sustainable development represents a very convenient slogan, that suggests much, but commits to nothing. It is a 'principle' which can easily attract 'wide and general acceptance by the global community', as long as it does not imply anything concrete. In such context, sustainable development is legitimately qualified as

«a simplistic formula, if not euphemism, which, from a policy-oriented point of view, more likely conceals conflicts rather than resolves them: conflicts between environment and development, present and future generations, north and south, national and international jurisdiction, self-interest and community interest.»⁽³⁹⁾

Sustainable development has shown itself to be a multi-faceted expression extremely frustrating to concretise, as complex as a cobweb. Study of one facet reveals new ones, and the research process soon becomes endless. Everything appears to be about sustainable development, and sustainable development appears to be about everything. To offer a complete understanding of sustainable development -if any such understanding is realistically feasible and practically useful- would be the work of a whole team of experts from various fields and many horizons⁽⁴⁰⁾. 1992 Agenda 21, the dynamic program for 'a new global partnership for sustainable development'⁽⁴¹⁾, is but a sample of what such global perspective might be. In fact, the contemplation of the legal environmental aspects proved more complex than anticipated.

It is feared however, whilst fully appreciating the importance of addressing the various contemporaneous issues in their interrelation with one another, that perhaps too much sense is being put in one single expression, with the risk that at the end, the expression would mean everything but in fact nothing. Paul Valéry once said that «à

(39) Primrosch, 'The Spirit of Sustainable Development within Authoritative Decision-Making Processes', 47 *Austrian JPIL* (1994), 81, at 82.

(40) As mentioned in introduction, ILA sub-division of its International Committee on Legal Effects of Sustainable Development into three sub-committees respectively on sustainable development and the environment, *Sustainable Development and Good Governance* (that includes human rights) and sustainable development and international economic order, epitomises particularly clearly the complexity of sustainable development and its relevance in the area identified in the text; see ILA, *Report of the sixty-sixth Conference*, Buenos Aires, 1994, 111, at 113. See also McGoldrick, 'Sustainable Development and Human Rights: An Integrated Conception', 45 *ICLQ* (1996), 796, for a particularly clear, temple-like presentation of the three main legal dimensions of sustainable development and their close inter-relation.

(41) 1992 Agenda 21, Para. 1.6.

trop y vouloir rattacher de valeurs, un mot peut perdre tout son sens»⁽⁴²⁾. As this thesis has demonstrated, there is considerable value in the further articulation and development of principles evolving in support of, and within the frame of sustainable development, but also autonomously from it.



(42) Quoted after Prof. November, 'Les Applications du développement durable et l'Agenda 21 local', paper delivered at a seminar organised by the Centre d'Ecologie Humaine et des Sciences de l'Environnement/Geneva University, *Développement durable*, First Part, Geneva, 12-13 March 1998.

BIBLIOGRAPHY**1. Papers & Periodicals**

Abi-Saab, G., 'The Legal Formulation of A Right to Development', in R.J. Dupuy (ed.), *The Right to Development at the International Level*, Hague Academy of International Law Workshop 1979 (Sijthoff & Noordhoff, Alphen aan den Rijn, The Netherlands, 1980), 159.

Adams, P., 'The World Bank and IMF in Sub-Saharan Africa: Undermining Development and Environmental Sustainability', 46 *JIA* (1992), 97.

Adede, A.O., 'The Group of 77 and the Establishment of the International Sea-Bed Authority', 7 *ODIL* (1979), 31.

Adede, A.O., 'International Environmental Law from Stockholm to Rio -An Overview of Past Lessons and Future Challenges-', 22 *EPL* (1992), 88.

Adede, A.O., 'The Road to Rio, the Development of Negotiations', in L. Campiglio *et al.* (eds.), *The Environment after Rio, International Law and Economics* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994), Chap. 1.

Agarwal, B., 'The Gender and Environmental Debate : Lessons from India', 18 *Feminist Studies* (1992), 119.

Aguilar, A.F., 'Enforcing the Right to a Healthy Environment in Latin America', 3 *RECIEL* (1994), 215.

Ahooja Patel, K., 'Women, Technology and Development', 14 *Economic & Political Weekly* (1979), 1549.

Agius, E., 'From Individual to Collective Rights, to the Rights of Mankind', in S. Busuttil *et al.* (eds.), *Our Responsibilities Towards Future Generations, A Programme of UNESCO and the International Environment Institute* (Foundation for International Studies & UNESCO, Malta, 1990), 27.

Akehurst, M., 'Jurisdiction in International Law', 45 *British YbIL* (1972-73), 145.

Allen, T., 'The Philippine Children's Case : Recognizing Legal Standing for Future Generations', 6 *Georgetown ILR* (1994), 713.

Allott, P., 'Power Sharing in the Law of the Sea', 77 *AJIL* (1983), 1.

Alston, P., 'A Third Generation of Solidarity Rights : Progressive Development or Obfuscation of International Human Rights Law ?', 29 *Netherlands LR* (1982), 307.

Alston, P., 'Conjuring New Human Rights : A Proposal For Quality Control', 78 *AJIL* (1984), 607.

Alston, P., 'The Short Comings of a 'Garfield the Cat' Approach to the Right to Development', 15 *California Western ILJ* (1985), 510.

Alston, P., 'Making Space for New Human Rights : The Case of the Right to Development', 1 *Human Rights Yb* (1988), 3.

Alston, P., 'US Ratification of the Covenant on Economic, Social and Cultural Rights : The Need for an Entirely New Strategy', 84 *AJIL* (1990), 365.

Alston, P., 'The Committee on Economic, Social and Cultural Rights', in P. Alston (ed.), *The United Nations and Human Rights* (Clarendon, Oxford, 1992), Chap. 12.

Anand, R.P., 'UN Convention on the Law of the Sea and the United States', 24 *Indian JIL* (1984), 153.

Anand, R.P., 'A New International Economic Order for Sustainable Development ?', in N. Al-Nauimi & R. Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, The Hague/Boston/London, 1995), 1209.

Anderson, D.H., 'Further Efforts to Ensure Universal Participation in the United Nations Convention on the Law of the Sea', 43 *ICLQ* (1994), 886.

Anderson, D.H., 'Legal Implications of the Entry into Force of the UN Convention on the Law of the Sea', 44 *ICLQ* (1995), 313.

Anderson, M.R., 'Human Rights Approaches to Environmental Protection : An Overview', in A.E. Boyle & M.R. Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, Oxford, 1996), Chap. 1.

Anderson, M.R., 'Individual Rights to Environmental Protection in India', in A.E. Boyle & M.R. Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, Oxford, 1996), Chap. 10.

Ando, N., 'The Law of Pollution Prevention in International Rivers and Lakes', in R. Zacklin & L. Caflich (eds.), *The Legal Regime of International Rivers and Lakes*, (Martinus Nijhoff, The Hague/Boston/London, 1981), 331.

Anghie, A., '"The Heart of my Home": Colonialism, Environmental Damage, and the Nauru Case', 34 *Harvard ILJ* (1993), 445.

Appleton, A.E., 'Gatt Article XX's Chapeau: A Disguised 'Necessary' Test?: The WTO Appellate Body's Ruling in *United States - Standards for Reformulated and Conventional Gasoline*', 6 *RECIEL* (1997), 131.

Archer, J.H. & M. Casey Jarman, 'Sovereign Rights & Responsibilities : Applying Public Trust Principles to the Management of EEZ Space and Resources', 17 *OCM* (1992), 253.

Arnold, R.P., 'Common Heritage of Mankind as a Legal Concept', 9 *International Lawyer* (1975), 153.

Arts, K. *et al.*, 'Joint Implementation from an International Law Perspective', in O. Kuik, *et al.* (eds.), *Joint Implementation to Curb Climate Change: Legal and Economic Aspects* (Kluwer Academic, Dordrecht/Boston/London, 1994), Chap. 1.

Asafuddowlah, M., 'Sharing of Transboundary Rivers : The Ganges Tragedy', in G.H. Blake *et al.* (eds.), *The Peaceful Management of Transboundary Resources* (Graham & Trotman/Martinus Nijhoff, London, 1995), Chap. 15.

ASIL, 'The Charter of Economic Rights and Duties of States', 69 *ASIL Proc.* (1975), 225.

ASIL, 'The Protection of the Global Heritage', 75 *ASIL Proc.* (1981), 32.

ASIL, 'Ten Years after Stockholm - International Environmental Law', 79 *ASIL Proc.* (1983), 411.

ASIL, 'Are Indigenous Populations Entitled to International Juridical Personality ?', 77 *ASIL Proc.* (1985), 189.

ASIL, 'Environment, Economic Development and Human Rights: A Triangular Relationship ?', 82 *ASIL Proc.* (1988), 40.

ASIL, 'Issues Relating to the 1992 Brazil Conference on the Environment', 86 *ASIL Proc.* (1992), 401.

ASIL, Law of the Sea Forum : *The 1994 Agreement on the Implementation of the Seabed Provisions of the Convention on the Law of the Sea*, 88 *AJIL* (1994), 687.

Assetto, V.J. & H. Bruyninckx, 'Environment, Security and Social Conflict: Implications of the Gabčíkovo-Nagymaros Controversy', in G.H., Blake *et al.* (eds.), *International Boundaries and Environmental Security: Frameworks for Regional Cooperation* (Kluwer Law International, London/The Hague/Boston, 1997), Chap. 20.

Austin, J. 'Canadian-United States Practice and Theory Respecting the International Law of International Rivers : A Study of the History and Influence of the Harmon Doctrine', 37 *Canadian Bar Review* (1959), 393.

- Backes, C.W. & J.M. Verschuuren, 'The Precautionary Principle in International, European, and Dutch Wildlife Law', 9 *Colorado JIELP* (1998), 43.
- Bains, J.S., 'The Diversion of International Rivers', 1 *Indian JIL* (1960-61), 38.
- Banerjee, S.K., 'The Concept of Permanent Sovereignty over Natural Resources : An Analysis', 8 *Indian JIL* (1968), 515.
- von Bar, L., 'L'exploitation industrielle des cours d'eau internationaux', 17 *RGDIP* (1913), 281.
- Barberis, J.A., 'Nouvelles Questions Concernant la Personnalité Juridique Internationale', 179 *RdC* (1983-I), 145.
- Barile, G., 'The Protection of Human Rights in Article 60, Paragraph 5 of the Vienna Convention on the Law of Treaties', in *Il diritto internazionale al tempo della sua codificazione. Studi in onore di Roberto Ago*, Vol. II (Giuffrè, Milano, 1987), 3.
- Barry, B., 'Circumstances of Justice and Future Generations', in R.I. Sikora & B. Barry (eds.), *Obligations to Future Generations* (Temple University Press, Philadelphia, 1978), 204.
- Barsh, R.L., 'The Right to Development as a Human Right : Results of the Global Consultation', 13 *Human Rights Quarterly* (1991), 322.
- Bates, G., 'The Legal Implications of Sustainable Development', 108 *Science of the Total Environment* (1991), 97.
- Bedjaoui, M., 'Remanences de théories sur la "souveraineté limitée" sur les ressources naturelles', in R. Gutiérrez Girardot *et al.* (eds.), *New Directions in International Law, Essays in Honour of Wolfgang Abendroth, Festschrift zu seinem 75. Geburtstag* (Campus, Frankfurt/New York, 1982), 63.
- Bedjaoui, M., 'Are the World's Food Resources the Common Heritage of Mankind ?', 24 *Indian JIL* (1984), 459.
- Beer-Gabel, J., 'L'exploitation du fonds des mers dans l'intérêt de l'humanité : chimère ou réalité ?', 81 *RGDIP* (1977), 167.
- Beesley, A., 'The Negotiating Strategy of UNCLOS III, Developing and Developed Countries As Partners - A Pattern for Future Multilateral Conferences ?', 46 *Law & Contemporary Problems* (1983), 183.
- Bekhechi, M.A., 'Le droit international à l'épreuve du développement durable', 6 *Hague YbIL* (1993), 59.
- Bekhechi, M.A., 'Une nouvelle étape dans le développement du droit international de l'environnement : La convention sur la désertification', 101 *RGDIP* (1997), 5.

- Belsky, M.H., 'Environmental Policy Law and the 1980s : Shifting Back the Burden of Proof', 12 *Ecology LQ* (1984), 1.
- Bell, D.E., 'The 1992 Convention on Biological Diversity : the Continuing Significance of US Objections at the Earth Summit', 26 *George Washington JIL & Economics* (1993), 479.
- Benedek, W., 'Progressive Development of the Principles and Norms of International Law Relating to the NIEO, The UNITAR Exercise', 36 *ÖZöRV* (1986), 289.
- Berat, L., 'Defending the Right to a Healthy Environment : Towards a Crime of Geocide in International Law', 11 *Boston University ILJ* (1993), 327.
- Berber, F.J., 'The Indus Water Dispute', 6 *Indian YbIA* (1957), 46.
- Berkovitz, D.M., 'Pariahs and Prophets : Nuclear Energy, Global Warming, and Intergenerational Justice', 17 *Columbia JEL* (1992), 245.
- van Beukering, P. & P. Vellinga, *Climate Change : From Science to Global Politics*, Institute for Environmental Studies, Vrije Universiteit, Amsterdam, 1993.
- Beyerlin, U., 'Rio-Konferenz 1992: Begin einer globalen Umweltrechtsordnung ?', 54 *ZäoRV* (1994), 124.
- Beyerlin, U., 'The Concept of Sustainable Development', in R. Wolfrum (ed.), *Enforcing Environmental Standards: Economic Mechanisms as Viable Means ?* (Springer, Berlin/Heidelberg/New York, 1996), 95.
- Biermann, F., '“Common Concern of Humankind” : the Emergence of a New Concept of International Environmental Law', 34 *AVR* (1996), 426.
- Bilder, R.B., 'The Present Legal and Political Situation in Antarctic', in J.I. Charney, *The New Nationalism and the Use of Common Spaces: Issues in Marine Pollution and the Exploitation of Antarctica* (Allanheld Osmun, Totowa-New Jersey, 1981), 198.
- Birnie, P., 'The North Sea Legal Regime', 16 *Ocean & Shoreline Management* (1991), 177.
- Birnie, P., 'International-Environmental Law : its Adequacy for Present and Future Needs', in A. Hurrell & B. Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, Oxford, 1992), Chap. 2.
- Birnie, P., 'Are Twentieth-Century Marine Conservation Conventions Adaptable to Twenty-First Century Goals and Principles?', 12 *IJ Marine & Coastal L* (1997), 307 (Part I) and 488 (Part II).
- Biswas, A.K., 'Environment and the Law : A Perspective from Developing Countries', in R.J. Dupuy (ed.), *The Future of International Law of the Environment*, Hague

- Academy of International Law Workshop 1984 (Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1985), 389.
- Blackstone, W.T., 'Ethics and Ecology', in W.T. Blackstone (ed.), *Philosophy and Environmental Crisis* (University of Georgia Press, Athens, 1974), 16.
- Bliss-Guest, P.A., 'The Protocol Against Pollution from Land-Based Sources: A Turning Point in the Rising Tide of Pollution', 17 *Stanford JIL* (1981), 261.
- Bliss-Guest, P.A., 'A Review of the Mediterranean Action Plan', 10 *Ocean Management* (1987), 315.
- Burke, W.T. *et al.*, 'United Nations Resolutions on Driftnet Fishing: An Unsustainable Precedent for High Seas and Coastal Fisheries Management', 25 *ODIL* (1994), 127.
- Boczek, B.A., 'Ideology and the Law of the Sea: The Challenge of the New International Economic Order', 7 *Boston College ICLR* (1984), 1.
- Bodansky, D., 'The Precautionary Principle in US Environmental Law, in T. O'Riordan & J. Cameron (eds.), *Interpreting the Precautionary Principle* (Cameron May, London, 1994), Chap. 12.
- Bodansky, D., 'Scientific Uncertainty and the Precautionary Principle', 33 *Environment* (1991), 4.
- Bodansky, D., 'Remarks on New Developments in International Environmental Law', *ASIL Proc.* (1991), 413.
- Bodansky, D., 'The United Nations Framework Convention on Climate Change: A Commentary', 18 *Yale JIL* (1993), 451.
- Bodansky, D., 'Prologue to the Climate Change Convention', in I.M. Mintzer & J.A. Leonard (eds.), *Negotiating Climate Change, The Inside Story of the Rio Convention*, (Cambridge University Press, Cambridge/New York, 1994), Chap. 2.
- Bodansky, D., 'Customary (and Not So Customary) International Environmental Law', 3 *Indiana Journal of Global Legal Studies* (1995), 105.
- Boer, B., 'Implementation of International Sustainability Imperatives at the National Level', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 8.
- Böhmer-Christiansen, S., 'The Precautionary Principle in Germany - Enabling Government', in T. O'Riordan & J. Cameron (eds.), *Interpreting the Precautionary Principle* (Cameron May, London, 1994), Chap. 2.
- Boisson de Chazournes, L., 'Variations juridiques sur le thème de l'ingérence écologique', in F. Sabelli (ed.), *Ecologie contre nature* (Presses Universitaires de France/Nouveau cahiers de l'IUED, Paris/Geneva, 1995), 53.

- Boisson de Chazournes, L., 'La mise en oeuvre du droit international dans le domaine de la protection de l'environnement: enjeux et défis', 99 *RGDIP* (1995), 37.
- Bollecker-Stern, B., 'The Legal Character of Emerging Norms Relating to the NIEO: Some Comments', in K. Hossain (ed.), *Legal Aspects of the New International Economic Order* (Frances Pinter/Nichols Publishing Company, London/New York, 1980), Chap. 2.
- Bonine, J.E., 'Environmental Impact Assessment - Principles Developed', 17 *EPL* (1987), 5.
- Bonucci, N., 'Towards an International Code of Conduct for Responsible Fishing', 2 *RECIEL* (1993), 245.
- Bookfield, H., 'Environmental Stability with Development: What Proposals For a Research Agenda?', in O. Stokke (ed.), *Sustainable Development* (Frank Cass, London, 1991), 42.
- Bothe, M., 'Legal and Non-Legal Norms: a Meaningful Distinction in International Relations?', 11 *Netherlands YbIL* (1980), 65.
- Bothe, M., 'Challenging French Nuclear Tests : a Role for Legal Remedies?', 5 *RECIEL* (1996), 253.
- Bothe, M. & H. Hohmann, 'Internationalization of Natural Resources Management', 3 *YbIEL* (1992), 171.
- Bourquin, M., 'Règles générales du droit de la paix', 35 *RdC* (1931-I), 5.
- Bourne, C.B., 'The Columbia River Controversy', 37 *Can. Bar Rev.* (1959), 444.
- Bourne, C.B., 'The Right to Utilize the Water of International Rivers', 3 *Canadian YbIL* (1965), 187.
- Bourne, C.B., 'International Law and Pollution of International Rivers and Lakes', 21 *University of Toronto LJ* (1971), 193.
- Bousek, E., 'Ein Beitrag zum internationalen Wasserrecht', 7 *Zeitschrift für Völkerrecht* (1913), 39.
- Boutros-Ghali, B., *An Agenda for Peace : Preventive Diplomacy, Peacemaking and Peace-keeping*, New York, 1992 ; reproduced in A. Hurrell & B. Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, Oxford, 1992), 470.
- van Boven, T., 'Critères de distinction des droits de l'homme', in K. Vasak (ed.), *Les dimensions internationales des droits de l'homme* (UNESCO, Paris, 1978), at 60.
- Bowman, M.J., 'The Convention on Civil Liability for Damages Resulting from Activities Dangerous to the Environment', 2 *Environmental Liability* (1994), 11.

- Bowman, M.J., 'The Ramsar Convention comes of Age', 42 *Netherlands ILR* (1995), 1.
- Boxer, B., 'Mediterranean Pollution : Problem and Response', 10 *ODIL* (1981/82), 315.
- Boyden Gray, C. & D.B. Rivkin, 'A No Regrets' Environmental Policy', 83 *Foreign Policy* (1991), 47.
- Boyle, A.E., 'From Sovereignty to Common Heritage: International Law for Antarctica', 25 *Texas JIL* (1990), 309.
- Boyle, A.E., 'State Responsibility and International Liability for Injurious Consequences of Acts not Prohibited by International Law: A Necessary Distinction?', 39 *ICLQ* (1990), 1.
- Boyle, A.E., 'State Responsibility for Breach of Obligations to Protect the Global Environment', in W.E. Butler, (ed.), *Control over Compliance with International Law* (Martinus Nijhoff, Dordrecht/Boston/London, 1991), 69.
- Boyle, A.E., 'International Law and the Protection of the Global Atmosphere: Concepts, Categories and Principles', in R. Churchill & D. Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1991), Chap. 1.
- Boyle, A.E., Books Review, 'In Fairness To Future Generations', 40 *ICLQ* (1991), 230.
- Boyle, A.E., 'Land-based Sources of Marine Pollution', 16 *Marine Policy* (1992), 20.
- Boyle, A.E., 'The Convention on Biological Diversity', in L. Campiglio *et al* (eds.), *The Environment After Rio: International Law and Economics* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994), Chap. 8.
- Boyle, A.E., 'Economic Growth and Protection of the Environment: the Impact of International Law and Policy', in A.E. Boyle (ed.), *Environmental Regulation and Economic Growth*, (Clarendon, Oxford, 1994), Chap. 8.
- Boyle, A.E., 'The Role of International Human Rights Law in the Protection of the Environment', in A.E. Boyle & M.R. Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, Oxford, 1996), Chap. 3.
- Boyle, A.E., 'Treaties and Soft-Law', Paper presented at Forum Geneva, *Multilateral Treaty-Making: The Current Status of Challenges to and Reforms Needed in the International Legislative Process*, organised by the American Society of International Law and the Institut Universitaire des Hautes Etudes Internationales, Geneva, May 16, 1998.
- Bragdon, S.H., 'National Sovereignty and Global Environmental Responsibility : Can the Tension be Reconciled for the Conservation of Biological Diversity?', 33 *Harvard ILJ* (1992), 381.

Brandl, E. & H. Bungert, 'Constitutional Entrenchment of Environmental Protection : A Comparative Analysis of Experiences Abroad', 16 *Harvard ELR* (1992), 1.

Bretherton, C., 'Gender and Environmental Change, Are Women the Key to Safeguarding the Planet?', in J. Vogler & M.F. Imber (eds.), *The Environment & International Relations* (Routledge, London/New York, 1996), Chap. 6.

British Royal Commission on Environmental Pollution, *Fifth Report : Air Pollution Control : An Integrated Approach*, HMSO, London, 1976.

British Royal Commission on Environmental Pollution, *Twelfth Report : Best Practicable Environmental Option*, HMSO, London, 1988.

Broms, B., 'The Nordic Convention on the Protection of the Environment', in C. Flinterman *et al.* (eds.), *Transboundary Air Pollution* (Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1986), Chap. 8.

Brower, C.N. & J.B. Tepe, 'The Charter of Economic Rights and Duties of States : A Reflection or Rejection of International Law ?', 9 *International Lawyer* (1975), 295.

Brown, E.D., 'The Consequences of Non Agreement', in L.M. Alexander (ed.), *The Law of the Sea : A New Geneva Conference*, Proceedings of the Sixth Conference of the Law of the Sea Institute, University of Rhode Island, Rhode Island (Kingstone), 21-24 June 1971, 14.

Brown, E.D., 'Neither Necessary Nor Prudent at this Stage : the Regime of Seabed Mining and its Impact on the Universality of the United Nations Convention on the Law of the Sea', 17 *Marine Policy* (1993), 81.

Brown, E.D., 'The 1994 Agreement on the Implementation of Part XI of the United Nations Convention on the Law of the Sea : Breakthrough to Universality ?', 19 *Marine Policy* (1995), 5.

Brown, J.W., 'The New World Dialogue: Promoting Sustainable Development in the Western Hemisphere', 1 *JED* (1992), 133.

Brown Weiss, E., 'Conflicts Between Present and Future Generations Over New Natural Resources', in R.J. Dupuy (ed.), *The Settlement of Disputes on the New Natural Resources*, Hague Academy of International Law Workshop 1982 (Martinus Nijhoff, The Hague/Boston/London, 1983), 177.

Brown Weiss, E., 'The Planetary Trust : Conservation and Intergenerational Equity', 11 *Ecology LQ* (1984), 495.

Brown Weiss, E., 'Conservation and Equity Between Generations', in T. Buergenthal (ed.), *Contemporary Issues in International Law : Essays in Honour of L.B.Sohn*, (N.P.Engel Publisher, Kehl/Strasbourg/Arlington, 1984), 245.

- Brown Weiss, E., 'International Law, Common Patrimony and Intergenerational Equity : Research in Progress', in R.J. Dupuy (ed.), *The Future of International Law of the Environment*, Hague Academy of International Law Workshop 1984 (Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1985), 445.
- Brown Weiss, E., 'Intergenerational Justice and Intergenerational Law', in S. Busuttil *et al.* (eds.), *Our Responsibilities Towards Future Generations, A Programme of UNESCO and the International Environment Institute* (Foundation for International Studies & UNESCO, Malta, 1990), 95.
- Brown Weiss, E., 'Our Rights and Obligations to Future Generations for the Environment', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 198.
- Brown Weiss, E., 'Environment and Trade as Partners in Sustainable Development : a Commentary', *Agora - Trade and Environment*, 86 *AJIL* (1992), 728.
- Brown Weiss, E., 'Intergenerational Equity : Legal Framework for Global Environmental Change', in E. Brown Weiss (ed.), *Environmental Change and International Law : New Challenges* (United Nations University Press, Tokyo, 1992), Chap. 12.
- Brown Weiss, E., 'Intergenerational Equity : Towards International Legal Framework', in N. Choucri (ed.), *Global Accord: Environmental Challenges and International Responses* (MIT, Cambridge, Massachusetts, 1993), Chap. 10.
- Brown Weiss, E., 'International Environmental Law: Contemporary Issues and the Emergence of a New World Order', 81 *Georgetown LJ* (1993), 676.
- Brown Weiss, E., 'Environmental Equity : the Imperative for the Twenty-First Century', in W. Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1995), Chap. 3.
- Brown Weiss, E., 'Environmental Equity and International Law', in UNEP (ed.), *UNEP's New Way Forward : Environmental Law and Sustainable* (UNEP, Nairobi, 1995), Chap. 2.
- Brown Weiss, E., 'Intergenerational Equity and Rights of Future Generations', in A.A. Cançado Trindade (ed.), *Human Rights, Sustainable Development and the Environment*, Seminário de Brasília de 1992 (Instituto Interamericano de Derechos Humanos, Banco Interamericano de Desarrollo, San José de Costa Rica, 1995), 71.
- Brown Weiss, E., 'Intergenerational Fairness for Fresh Water Resources', 25 *EPL* (1995), 231.
- Brownlie, I., 'A Survey of International Customary Rules of Environmental Protection', 13 *Natural Resources Journal* (1973), 179 ; reprinted in L.A. Teclaff & A.E. Utton (eds.), *International Environmental Law* (Praeger, New York, London, 1974), 1.

- Brownlie, I., 'Legal Status of Natural Resources in International Law', 162 *RdC* (1979-I), 245.
- Brownlie, I., 'The Methodological Problems of International Law and Development', 26 *Journal of African Law* (1982), 8.
- Brownlie, I., 'The Rights of Peoples in Modern International Law', in J. Crawford (ed.), *The Rights of Peoples* (Clarendon, Oxford, 1988), Chap. 1.
- Brownlie, I., *The Human Right to Development*, Study prepared for the Commonwealth Secretariat, Commonwealth Secretariat, London, 1989.
- Brundtland, G.H., 'Sustainable Development: the Challenge Ahead', in O. Stokke (ed.), *Sustainable Development* (Frank Cass, London, 1991), 32.
- Brunnée, J., 'Common Interest- Echoes from an Empty Shell? Some Thoughts on Common Interests and International Environmental Law', 49 *ZaöRV* (1989), 791.
- Brunnée, J., 'A Conceptual Framework for an International Forests Conventions: Customary Law and Emerging Principles', in Canadian Council on International Law (ed.), *Global Forests and International Environmental Law* (Kluwer Law International, London/The Hague/Boston, 1996), Chap. 2.
- Brusasco-Mackenzie, M., 'The Role of the European Communities', in L. Campiglio *et al.* (eds.), *The Environment after Rio, International Law and Economics* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994), Chap. 3.
- Bryde, B.-O., 'Umweltschutz durch allgemeines Völkerrecht?', 31 *AVR* (1993), 1.
- Bulajic, M., 'Legal Aspects of a New International Economic Order', in K. Hossain (ed.), *Legal Aspects of the New International Economic Order* (Frances Pinter/Nichols Publishing Company, London/New York, 1980), Chap. 1.
- Bullington, J.P., 'Problems of International Law in the Mexican Constitution of 1917', 21 *AJIL* (1927), 685.
- Burhenne-Guilmin, F. & S. Casey-Lefkowitz, 'The Convention on Biological Diversity: A Hard Won Global Achievement', 3 *YbIEL* (1992), 43.
- Burhenne, W.E., 'The Role of NGOs', in W. Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1995), Chap. 13.
- Burton, F.N. & H. Inoue, 'Expropriations of Foreign-Owned Firms in Developing Countries: A Cross National Analysis', 18 *JWTL* (1984) 396.
- Caflich, L., 'La pratique suisse en matière de droit international public - 1970', 27 *ASDI* (1971), 153.

Caldwell, L.K., 'The Geopolitics of Environmental Policy : Transnational Modification of National Sovereignty', 59 *Revista Jurídica de la Univerisdad de Puerto Rico* (1990), 693.

Caldwell, L.K., 'Beyond Environmental Diplomacy: the Changing Institutional Structure of International Cooperation', in A. Hurrell & B. Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, Oxford, 1992), Chap. 2.

Cameron, J. & J. Abouchar, 'The Precautionary Principle : A Fundamental Principle of Law and Policy for the Protection of the Global Environment', 14 *Boston College ICLR* (1991), 1.

Cameron, J. & J. Robinson, 'The Use of Trade Provisions in International Environmental Agreements and their Compatibility with the Gatt', 2 *YbIEL* (1991) 3.

Cameron, J. & W. Wade-Gery, *Addressing Uncertainty: Law, Policy, and the Precautionary Principle*, Centre for Social and Economic Research of the Global Environment Working Paper 92-43, University of East Anglia, 1992.

Cameron, J., 'The Status of the Precautionary Principle in International Law', in T. O'Riordan & J. Cameron (eds.), *Interpreting the Precautionary Principle* (Cameron May, London, 1994), Chap. 15.

Cameron, J., P.M. Pevato & J. Abouchar, 'International Implementation of the Principles', Background Paper for the Fenner Conference on the Environment on *Sustainability - Principles to Practice*, Parts I-V, FIELD, London, 1994.

Cameron, J., 'Future Directions in International Environmental Law : Precaution, Integration and Non-state Actors', Paper presented at the Read Memorial Lecture for 1995, 19 *Dalhousie LJ* (1996), 122.

Cameron, J., W. Wade-Gery & J. Abouchar, 'Precautionary Principle and Future Generations', in E. Agius, *et al.* (eds.), *Future Generations and International Law* (Earthscan, London, 1998), Chap. 9.

Cameron, J., 'The 1997 Kyoto Protocol to the 1992 Framework Climate Change Convention', Paper presented at the Institut Universitaire des Hautes Etudes Internationales, Geneva, March 16, 1998.

Cameron, J.I., 'Policies for Achieving Ecologically Sustainable Development', 108 *Science of the Total Environment* (1991), 71.

Cameron, J.R., 'Do Future Generations Matter?', N. Dower (ed.), *Ethics and Environmental Responsibility* (Adlershot, Avebury, 1989), Chap. 4.

Cançado Trindade, A.A., 'The Parallel Evolutions of International Human Rights Protection and of Environmental Protection, and the Absence of Restrictions upon the Exercise of Recognized Human Rights', 13 *Revista del Instituto Interamericano de Derechos Humanos* (1991), 35; reproduced with some modification and updated as

- 'Environmental Protection and the Absence of Restrictions on Human Rights', K.E. Mahoney & P. Mahoney, *Human Rights in the Twenty-first Century, A Global Challenge* (Martinus Nijhoff, Dordrecht/Boston/London, 1993), 561.
- Cançado Trindade, A.A., 'The Contribution of Human Rights Law to Environmental Protection, With Specific Reference to Global Environmental Change', in E. Brown Weiss (ed.), *Environmental Change and International Law: New Challenges and Dimensions*, United Nations University Press, Tokyo, 1992), Chap. 9.
- Cançado Trindade, A.A., 'Relations Between Sustainable Development and Economic, Social and Cultural Rights: Recent Developments', in N. Al-Nauimi & R. Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, The Hague/Boston/London, 1995), 1051.
- Cançado Trindade A.A. & D.J. Attard, 'The Implications of the 'Common Concern of Mankind' Concept on Global Environmental Issues', in T. Iwama (ed.), *Policies and Laws on Global Warming: International and Comparative Analysis* (Environmental Research Center, Tokyo, 1991), 7.
- Caponera, D. & D. Alhéritère, 'Principles for International Groundwater Law', in L.A. Teclaff & A.E. Utton, *International Groundwater Law* (Oceana, London, 1981), 25.
- Caron, D.D., 'Deep Seabed Mining: A comparative Study of U.S. and West German Municipal Legislation', 5 *Marine Policy* (1981), 4.
- Caron, D.D., 'Municipal Legislation for Exploitation of Deep Seabed', 8 *ODIL* (1980), 259.
- Caron, D.D., 'La protection de la couche d'ozone stratosphérique et la structure de l'activité normative internationale en matière d'environnement', 36 *AFDI* (1990), 704.
- Cassese, A., 'The Self-Determination of Peoples', in L. Henkin (ed.), *The International Bill of Rights: The Covenant on Civil and Political Rights* (Columbia University Press, New York, 1981), Chap. 4.
- Castañeda, J., 'La valeur juridique des résolutions des Nations Unies', 129 *RdC* (1970-I), 211.
- Castañeda, J., 'La Charte des droits et devoirs économiques des États, Note sur son processus d'élaboration', 20 *AFDI* (1974), 31.
- Cerny, R.J. & W.R. Sheate, 'Strategic Environmental Assessment: Amending the EA Directive', 22 *EPL* (1992), 154.
- Chandler, M., 'The Biodiversity Convention: Selected Issues of Interest to the International Lawyer', 4 *Colorado JIELP* (1993), 141.
- Chapman, A.R., 'Symposium Overview', Symposium on Earth Rights and Responsibilities: Human Rights and Environmental Protection, 18 *Yale JIL* (1993), 215.

- Charney, J.I., 'United States Interests in a Convention on the Law of the Sea : the Case for Continued Efforts', 11 *Vanderbilt JTL* (1978), 39.
- Charney, J.I., 'Technology and International Negotiations', 76 *AJIL* (1982), 78.
- Charney, J.I., 'Third States Remedies for Environmental Damage to the World's Common Spaces', in F. Francioni & T. Scovazzi, *International Responsibility for Environmental Harm* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1991), Chap. 6.
- Charney, J.I., 'Universal International Law', 31 *AJIL* (1993), 529.
- Charney, J.I., 'The Antarctic System and Customary International Law', F. Francioni & T. Scovazzi (eds.), *International Law for Antarctica*, 2nd edn (Kluwer Law International, The Hague/London/Boston, 1996), Chap. 3.
- Charnovitz, S., 'Exploring the Environmental Exceptions in Gatt Article XX', 25 *JWT* (1991), 37.
- Charnovitz, S., 'Environmentalism Confronts Gatt Rules', 27 *JWT* (1993), 37.
- Chaumont, C., 'Valeur juridique des résolutions des Nations Unies', 129 *RdC* (1970-I), 366.
- Cheng, B., 'The Legal Regime of Airspace and Outer Space : The Boundary Problem, Functionalism versus Spatialism : The Major Premises', 5 *Annals of Air & Space Law* (1980), 323.
- Cheng, B., 'United Nations Resolution on Outer Space: 'Instant' International Customary Law ?', 5 *Indian JIL*(1965), 23.
- Chengyuan, 'Legal Aspects of the Global Partnership Between North and South', in N. Al-Nauimi & R. Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, The Hague/Boston/London, 1995), 203.
- Chircop, A., 'The Mediterranean Sea and the Quest for Sustainable Development', 23 *ODIL* (1992), 17.
- Chisholm, A.H. & H.R. Clarke, 'Natural Resource Management and the Precautionary Principle', in Dommen (ed.), *Fair Principles for Sustainable Development* (Edward Elgar, for UNCTAD, 1993), Chap. 7.
- Chopra, S.K., 'Antarctica as a Commons Regime : A Conceptual Framework for Cooperation and Coexistence', in C.C. Joyner & S.K. Chopra (eds.), *The Antarctic Legal Regime* (Nijhoff, Dordrecht, 1988), Chap. 13.
- Chowdhury, S.R., 'Legal Status of the Charter of Economic Rights and Duties of States', in K. Hossain (ed.), *Legal Aspects of the New International Economic Order* (Frances Pinter/Nichols Publishing Company, London/New York, 1980), Chap. 3.

- Chowdhury, S.R., 'Permanent Sovereignty Over Natural Resources', in K. Hossain & S.R. Chowdhury (eds.), *Permanent Sovereignty Over Natural Resources, Principles and Practice* (Frances Printer, London, 1984), Chap. 1.
- Chowdhury, S.R., 'Intergenerational Equity : Substratum of the Right to Sustainable Development', in S.R. Chowdhury *et al.* (eds.), *The Right to Development in International Law* (Martinus Nijhoff, Dordrecht/Boston/London, 1992), Chap. 3.1.
- Chowdhury, S.R., 'Common But Differentiated State Responsibility in International Environmental Law: From Stockholm (1972) to Rio (1992)', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 20.
- Christie, E., 'The Eternal Triangle : The Biodiversity Convention, Endangered Species Legislation and the Precautionary Principle', 10 *EPLJ* (1993), 470.
- Christol, C.Q., 'Province of Mankind Concept', in C.Q. Christol, *Space Law : Past, Present and Future* (Kluwer Law & Taxation, Deventer, 1991), 67.
- Churchill, R., 'Environmental Rights in Existing Human Rights Treaties', in A.E. Boyle & M.R. Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, Oxford, 1996), Chap. 5.
- Clagett, B.M., 'A Reply to Professor Lowenfeld', *Agora -The Cuban Liberty & Democratic Solidarity (LIBERTAD) Act*, 90 *AJIL* (1996), 641.
- Clark, B., 'The Vienna Convention Reservations Regime and the Convention on Discrimination Against Women', 85 *AJIL* (1991), 281.
- Clingan, T.A., 'The Law of the Sea Convention : International Obligations and Stewardship Responsibilities of Coastal Nations', 17 *OCM* (1992), 201.
- Cocca, A.A., 'The Advances In International Law Through the Law of Outer Space', 9 *Journal of Space Law* (1981), 13.
- Cocca, A.A., 'Environment as a Common Heritage of Mankind', *Proceedings of the 32nd Colloquium on the Law of Outer Space* (1989), 71.
- Cocca, A.A., 'The Law of Mankind : Ius Inter Gentes Again', 12 *Annuaire de Droit Maritime & Aero-Spatial* (1993), 507.
- Cohen, M., 'The Régime of Boundary Waters - the Canadian-United States Experience', 146 *RdC* (III-1975), 219.
- Collier, P., *Women in Development : Defining the Issues*, Working Paper, The World Bank, Washington D.C., 1988.
- Conway, G.R., 'Agroecosystem Analysis', ICCET Series E, No 1, Imperial College London, London, 1983.

- Conca, K., 'Rethinking the Ecology-Sovereignty Debate', 23 *Millennium* (1994), 701.
- Cooke, J., & M. Earle, 'Towards a Precautionary Approach to Fisheries Management?', 2 *RECIEL* (1993), 252.
- Cousin, M.E.R., 'Le projet de la CNUCED de Code international de conduite pour le transfert des techniques', 19 *German YbIL* (1976), 199.
- Craig, D. & D. Ponce Nava, 'Indigenous Peoples' Rights and Environmental Law', in UNEP (ed.), *UNEP's New Way Forward: Environmental Law and Sustainable Development* (UNEP, Nairobi, 1995), Chap. 8.
- Crawford, C., 'The Rights of Peoples: 'Peoples' or 'Governments'?', in J. Crawford (ed.), *The Rights of Peoples* (Clarendon, Oxford, 1988), Chap. 4.
- Crawford, C., 'Some Thoughts on the North American Free Trade Agreement, Political Stability and Environmental Equity', 20 *Brooklyn JIL* (1995), 585.
- Crowe, B.L., 'The Tragedy of the Commons Revisited', 166 *Science* (1969), 1103.
- Daes, E.I.A. (Special Rapporteur), Study on the Status of the Individual and Contemporary International Law, Promotion, Protection and Restoration of Human Rights at National, Regional and International Levels, UN Center for Human Rights, Study Series No. 4, UN Publications, New York, 1992.
- D'Amato, A., 'Do We Owe a Duty to Future Generations to Preserve the Global Environment?', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 190.
- Dan Tarlock, A., 'Stewardship Sovereignty: The Next Step in Former Prime Minister Palmer's Logic', 42 *Washington University Journal of Urban & Contemporary Law* (1992), 21.
- Dan Tarlock, A., 'Exclusive Sovereignty versus Sustainable Development of a Shared Resource: the Dilemma of Latin American Rainforest Management', 32 *Texas ILJ* (1997), 37.
- Danilenko, G.M., 'The Concept of Common Heritage of Mankind in International Law', 13 *Annals of Air & Space Law* (1988), 247.
- Danilenko, G.M., 'The Theory of International Customary Law', 31 *German YbIL* (1988), 9.
- Darman, R.G., 'The Law of the Sea: Rethinking the U.S. Interests', 56 *Foreign Affairs* (1978), 373.
- Davidson, A. & I. Barns, 'The Earth Summit and the Ethics of Sustainable Development', 1 *Current Affairs Bulletin* (1992), 4.

- Davies, P.G.G., 'The EC/Canadian Fisheries Dispute in the North West Atlantic', 4 *ICLQ* (1995), 927.
- Davies, P.G.G. & C. Redgwell, 'The International Legal Regulation of Straddling Fish Stocks', 67 *British YbIL* (1997), 199.
- Decaux, E., 'Commission Européenne des droits de l'homme, décision du 4 décembre 1995 sur la recevabilité de la requête présentée par MM. Taura *et al.* contre France', 100 *RGDIP* (1996), 741.
- Deimann, S., 'French Nuclear Tests : Court of First Dismisses Application for Interim Relief', 1 *Environmental Law Network International* (1996), 48.
- Déjeant-Pons, M., 'Le droit de l'homme à l'environnement, droit fondamental au niveau européen dans le cadre du Conseil de l'Europe, et la Convention européenne de sauvegarde des droits de l'homme et des libertés fondamentales', *Revue Juridique de l'Environnement* (1994-4), 373.
- Delgado, R., 'Our Better Natures : A Revisionist View of Joseph Sax's Public Trust Theory of Environmental Protection, and Some Dark Thoughts on the Possibility of Law Reform', 44 *Vanderbilt LR* (1991), 1209.
- Desagné, R., 'Integrating Environmental Values into the European Convention on Human Rights', 89 *AJIL* (1995), 263.
- Dickstein, H.L., 'International Lake and River Pollution Control : Questions of Method', 12 *Columbia JTL* (1973), 487.
- van Dijk, P., 'Normative Force and Effectiveness of International Norms', 30 *German YbIL* (1987), 9.
- Dinstein, Y., 'Collective Human Rights of Peoples and Minorities', 25 *ICLQ* (1976), 102.
- Dolzer, R., 'Permanent Sovereignty over Natural Resources and Economic Decolonization', 7 *HRLJ* (1986), 217.
- Dolzer, R., 'Individual Freedom and Environmental Protection', in M. Bothe (ed.), *Trends in Environmental Policy and Law* (IUCN, Gland, Switzerland, 1980), 29.
- Dominicé, C., 'L'émergence de l'individu en droit international public', 16 *Annales d'études internationales* (1987-88), 1.
- Dominicé, C., 'Les Principes: leur portée et leur signification', paper delivered at a seminar organised by the Centre d'Ecologie Humaine et des Sciences de l'Environnement/Geneva University, *Développement durable*, First Part, Geneva, 12-13 March 1998.

- Dommen, C., 'Bordes & Temeharo c/France, une tentative de faire protéger l'environnement par le Comité des droits de l'homme', *Revue Juridique de L'Environnement* (1997-2), 157.
- Donnelly, J., 'How Are Rights and Duties Correlative?', 16 *Journal of Value Inquiry* (1982), 287.
- Donnelly, J., 'In Search of the Unicorn: The Jurisprudence and Politics of the Right to Development', 15 *California Western ILJ* (1985), 473.
- Donovan, G.P., 'The International Whaling Commission and the Revised Management Procedure', in European Bureau for Conservation and Development, *Proceedings of the Conference on Responsible Wildlife Resource Management*, Brussels, 29-3 1993.
- Douglas-Scott, S., 'Environmental Rights in the European Union: Participatory Democracy or Democratic Deficit?', in A.E. Boyle & M.R. Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, Oxford, 1996), Chap. 6.
- Dovers, S.R. & J.W. Handmer, 'Contradictions in Sustainability', 20 *Environmental Conservation* (1993), 217.
- Dovers, S.R. & J.W. Handmer, 'Ignorance, the Precautionary Principle, and Sustainability', 24 *Ambio* (1995), 92.
- Dovers, S.R., T.W. Norton & J.W. Handmer, 'Uncertainty, Ecology, Sustainability and Policy', 5 *Biodiversity Conservation* (1996), 1143.
- Doyle, S.E., 'Legal and Policy Implications of Treating Natural Resources as the Common Heritage of Mankind', *Proceedings of the 32nd Colloquium on the Law of Outer Space* (1989), 31.
- Drogula, J.M., 'Developed and Developing Countries: Sharing the Burden of Protecting the Atmosphere', 4 *Georgetown IELR* (1992), 257.
- Dubourg, R. & D. Pearce, 'Paradigms for Environmental Choices: Sustainability versus Optimality', in S. Faucheux *et al.* (eds.), *Models of Sustainable Development, New Horizons in Environmental Economics* (Edward Elgar, Cheltenham, UK/Brookfield, US, 1996), Chap. 2.
- Duff, J.A., 'UNCLOS and the New Deep Seabed Mining Regime: the Risk of Refuting the Treaty', 19 *Suffolk TLR* (1995), 1.
- Dunoff, J.L., 'Institutional Misfits: The GATT, the ICJ & Trade-Environment Disputes', 15 *Michigan JIL* (1994), 1043.
- Dupuy, P.M., 'Due Diligence in International Law of Liability', in OECD (ed.), *Legal Aspects of Transfrontier Pollution* (OECD, Paris, 1977), 369.

- Dupuy, P.M., 'Le Droit à la santé et la protection de l'environnement', in R.J. Dupuy, (ed.), *The Right to Health as a Human Right*, Hague Academy of International Law Workshop 1978 (Sijthoff & Noordhoff, Alphen aan den Rijn, The Netherlands, 1979), 340.
- Dupuy, P.M., 'Action publique et crime international de l'État: A propos de l'article 19 du projet de la commission du droit international sur la responsabilité des Etats', 25 *AFDI* (1979), 539.
- Dupuy, P.M., 'International Liability for Transfrontier Pollution', in M. Bothe (ed.), *Trends in Environmental Policy and Law* (IUCN, Gland, Switzerland, 1980), 363.
- Dupuy, P.M., 'Le droit international de l'environnement et la souveraineté des Etats', in R.J. Dupuy (ed.), *The Future of International Law of the Environment*, Hague Academy of International Law Workshop 1984 (Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1985), 29.
- Dupuy, P.M., 'Soft Law and the International Law of the Environment', 12 *Michigan JIL* (1991), 420.
- Dupuy, P.M., 'Où en est le droit international de l'environnement à la fin du siècle?', 101 *RGDIP* (1997), 873.
- Dupuy, R.J., 'Droit déclaratoire & droit programmatoire : de la coutume sauvage à la soft law' in Société Française de Droit International, *L'élaboration du droit international public*, Colloque, Toulouse (Pédone, Paris, 1974) ; revised and updated English version as 'Declaratory Law and Programmatic Law : From Revolutionary Custom to 'Soft Law'', in R.J. Akkerman *et al.* (eds.), *Declarations on Principles, A quest for Universal Peace* (Sijthoff, Leyden, 1977), 247.
- Dupuy, R.J., 'Communauté internationale et disparités de développement', Cours général de droit international public, 165 *RdC* (1979-IV), 9.
- Dupuy, R.J., 'Humanité et environnement', XII *Annuaire de Droit Maritime & Aero-Spatial* (1993), 493.
- Dutoit, B., 'L'accident de Tchernobyl et ses conséquences en droit soviétique et en droit international public', in B. Dutoit *et al.*, *Pollution transfrontière/Grenzüberschreitende Verschmutzung : Tschernobyl/Schweizerhalle* (Helbing & Lichtenhahn, Basel/Frankfurt, 1989), Chap. I.
- Dyer, H.C., 'Environmental Security as a Universal Value', in J. Vogler & M.F. Imber (eds.), *The Environment & International Relations* (Routledge, London/New York, 1996), Chap. 2.
- Earll, R.C., 'Common Sense and the Precautionary Principle - An Environmentalist's Perspective', 24 *MP Bull.* (1992), 182.

- Eckstein, G., 'Application of International Water Law to Transboundary Groundwater Resources, and the Slovak-Hungarian Dispute Over Gabčíkovo-Nagymaros', 19 *Suffolk TLR* (1995), 67.
- The Ecologist, 'A Blueprint For Survival', 2 *The Ecologist* (1972), 1.
- Ehlers, P., 'The History of the International North Sea Conferences', in D. Freestone & T. Ijstra (eds.), *The North Sea : Perspectives on Regional Environmental Co-operation*, Special Issue of the International Journal of Estuarine and Coastal Law (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1990), Chap. 1.
- El Ashry, M.T., 'Balancing Economic Development with Environmental Protection in Developing and Lesser Developed Countries'. 43 *Journal of the Air and Wastes Management Association* (1993), 18.
- El-Ashry, M.T., 'International Cooperation, the Environment and Global Security', 18 *Populi* (1991), 16.
- Emmenegger, S. & A. Tschentscher, 'Taking Nature's Rights Seriously : The Long Way to Biocentrism in Environmental Law', 6 *Georgetown IELR* (1994), 545.
- Environment and Development*, The Founex Report on Environment and Development, Submitted by a Panel of Experts Convened by the Secretary-General of the United Nations Conference on the Human Environment, 4-12 June 1971, Founex, Switzerland, in *International Conciliation* No. 586 (Carnegie Endowment for International Peace, New York, 1972), 7.
- Environment Liaison Centre International, *Women and the Environmental Crisis*, Forum '85 (ELCI, Nairobi, 1985).
- Epiney, A., 'Das "Verbot erheblicher grenzüberschreitender Umweltbeeinträchtigungen" : Relikt oder konkretisierungsfähige Grundnorm ?', 33 *AVR* (1995), 309.
- Epiney, A. & M. Scheyli, 'Le concept de développement durable en droit international public', 7 *Schweizerisches Zeitschrift für Internationales & Europäisches Recht* (1997), 247.
- Ermacora, F., 'The Protection of Minorities Before the United Nations', 182 *RdC* (1983-IV), 247.
- Eshbach, R., 'A Global Approach to the Protection of the Environment : Balancing State Sovereignty and Global Interests', 4 *Temple ICLJ* (1990), 271.
- Espiell, H.G., 'The Right to Development as a Human Right', 16 *Texas ILJ* (1981), 189.
- Esteva, G. & M.S. Prakash, 'Grassroots Resistance to Sustainable Development : Lessons from the Banks of the Narmada', 22 *The Ecologist* (1992), 45.

- Eustathiades, I.C.T., 'Les sujets du droit international et la responsabilité internationale, nouvelles tendances', 84 *RdC* (1953-III), 401.
- Fabra, A., 'Indigenous Peoples, Environmental Degradation, and Human Rights : A Case Study', in A.E. Boyle & M.R. Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, Oxford, 1996), Chap. 12 ; drawn from Fabra, A., *The International Protection of the Forest : A Case Study in Ecuador*, Field Report, London, 1992.
- Fabra Aguilar, A. & N.A. Popovic, 'Lawmaking in the United Nations: The UN Study on Human Rights and the Environment', 3 *RECIEL* (1994), 197.
- Falk, R.A., 'On the Quasi-Legislative Competence of the General Assembly', 60 *AJIL* (1966), 782.
- Falk, R.A., 'The Rights of Peoples (In Particularly Indigenous Populations)', in J. Crawford (ed.), *The Rights of Peoples* (Clarendon, Oxford, 1988), Chap. 2.
- Falk, R.A., 'Environmental Protection in an Era of Globalization', 6 *YbIEL* (1995), 3.
- Fatouros, A.A., 'Developing States', in R. Bernhardt (ed.), *Encyclopedia of Public International Law*, Instal. 9 (North-Holland, Amsterdam/New York/Oxford, 1986), 71.
- Feeny, D. *et al.*, 'The Tragedy of the Commons : Twenty-Two Years Later', 18 *Human Ecology* (1990), 1.
- Feinberg, J., 'The Rights of Animals and Unborn Generations', in W.T. Blackstone (ed.), *Philosophy & Environmental Crisis* (University of Georgia Press, Athens, 1974), 43.
- Feischer, C.A., 'The International Concern for the Environment : The concept of Common Heritage of Mankind', in M. Bothe (ed.), *Trends in Environmental Policy and Law* (IUCN, Gland, Switzerland, 1980), 321.
- Feldman, D., 'International Personality' 191 *RdC* (1985- II), 343.
- Fenwick, C.G., 'International Law : the Old and the New', 60 *AJIL* (1966), 475.
- Fernandez, J.L., 'State Constitutions, Environmental Rights Provisions and the Doctrine of Self-Execution : A Political Question ?', 17 *Harvard ELR* (1993), 333.
- Ferrari Bravo, L., 'Considérations sur la méthode de recherche des principes généraux du droit international de l'environnement', 7 *Hague YbIL* (1994), 3.
- Feuer, G., 'Réflexions sur la charte des droits et devoirs économiques des Etats', 79 *RGDIP* (1975), 273.
- Fischer, G., 'La souveraineté sur les ressources naturelles', 8 *AFDI* (1962), 516.
- Fischer Williams, Sir John, 'International Law and the Property of Aliens', 9 *British YbIL* (1928), 1.

- Flattet, G., 'Le *Trust* en droit suisse', in *La fiducie ou du trust dans les droits occidentaux francophones*, 44 *Revue juridique et politique, indépendance et coopération* (1990), 263.
- Fleischer, C.A., 'The International Concern for the Environment: The Concept of Common Heritage', in Bothe (ed.), *Trends in Environmental Policy and Law* (IUCN, Gland, Switzerland, 1980), 321.
- Florio, F., 'Nota sull' inquinamento delle acque non marittime nel diritto internazionale', 46 *Rivista di Diritto Internazionale* (1963), 588.
- Florio, F., 'Sur l'utilisation des eaux non maritimes en droit international', in D. Blumenwitz & A. Randelzhofer (eds.), *Festschrift für Friedrich Berber* (C.H.Beck, München, 1973), 151.
- Florio, F., 'Water Pollution and Related Principles of International Law', 17 *Canadian YbIL* (1979), 134.
- Flory, M., 'Inégalité économique et évolution du droit international', in Société Française pour le Droit International, *Pays en voie de développement et transformation du droit international* Colloque d'Aix-en-Provence (Pédone, Paris, 1974), 11.
- Flory, M., 'La troisième décennie pour le développement', 26 *AFDI* (1980), 593 ; published in English in 26 *Journal of African Law* (1982), 69.
- Flory, M., 'Adapting International Law to the Development of the Third World', 26 *Journal of African Law* (1982), 12.
- Flory, M., 'La quatrième décennie pour le développement ; la fin du nouvel ordre économique international ?' 36 *AFDI* (1990), 606.
- Fraenkel, A.A., 'The Convention on Long-Range Transboundary Air Pollution : Meeting the Challenge of International Cooperation', 30 *Harvard ILJ* (1989), 447.
- Francioni, F., 'Compensation for Nationalization of Foreign Property : the Borderland between Law and Equity', 24 *ICLQ* (1975), 255.
- Francioni, F., 'Antarctica and the Common Heritage of Mankind', in F. Francioni & T. Scovazzi (eds.), *International Law for Antarctica* (Giuffrè, Milano, 1987), 101.
- Franck, T.M. & D.M. Sughure, 'The International Role of Equity-as-Fairness', 81 *Georgetown LJ* (1993), 563.
- Fraenkel, A.A., 'The Convention on Long Range Transboundary Air Pollution: Meeting the Challenge of International Cooperation', 30 *Harvard JIL* (1989), 447.
- Fratcher, W.F., 'Trust', in *International Encyclopedia of Comparative Law*, Vol.V, Chap. 11 (J.C.B. Mohr, Tübingen/Mouton/The Hague/Paris, 1972).

- Freestone, D., 'The Precautionary Principle', in R. Churchill & D. Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1991), Chap. 2.
- Freestone, D., *The Road from Rio: International Environmental Law after the Earth Summit*, the University of Hull Press, Hull, 1993.
- Freestone, D., 'Canadian and the EU Reach Agreement to Settle the *Estai* Dispute', 10 *IJ Marine & Coastal L* (1995), 397.
- Freestone, D. & D. Ryland, 'EC Environmental Law After Maastricht', 45 *NILQ* (1994), 152.
- Freestone, D. & Z. Makuch, 'The New International Environmental Law of Fisheries: the 1995 United Nations Straddling Stocks Agreement', 7 *YbIEL* (1996), 3.
- Friedman, A.G. & C.A. Williams, 'The Group of 77 at the United Nations: an Emergent Force in the Law of the Sea', 16 *San Diego LR* (1979), 555.
- Friedmann, W., 'The Changing Structure of International Law', in R.A. Falk et al. (eds.), *International Law, a Contemporary Perspective* (Westview, Boulder, 1985), 142.
- Galambos, J., 'Political Aspects of an Environmental Conflict: The Case of the Gabčíkovo-Nagymaros Dam System', in J. Käkönen (ed.), *Perspectives on Environmental Conflict and International Relations* (Pinter, London/New York, 1992), Chap. 6.
- Galindo Pohl, R., 'Latin America's Influence and Role in the Third Conference on the Law of the Sea', 7 *ODIL* (1979), 65.
- Gallopín, G.C., P. Gutman & H. Maletta, 'Global Impoverishment, Sustainable Development and the Environment: a conceptual approach', 41 *International Social Science Journal* (1989), 375.
- García, S.M., 'The Precautionary Principle: its Implications in Capture Fisheries Management', 22 *OCM* (1994), 99.
- García Ureta, A., 'The E.C. Environmental Impact Assessment Directive Before the European Court of Justice', 5 *Environmental Liability* (1997), 1.
- Gavouneli, M., 'The Obligation to Protect the Environment with Reference to Marine Pollution Regulations', 46 *Revue Hellénique de Droit International* (1993), 77.
- German Council of Environmental Advisers, 'In Pursuit of Sustainable Environmentally Sound Development', 1994 Environmental Report (extracts), in 25 *EPL* (1995), 90.
- Gess, K.N., 'Permanent Sovereignty over Natural Resources', 13 *ICLQ* (1964), 398.
- Gilbert, G., 'The Criminal Responsibility of States', 39 *ICLQ* (1990), 345.

- Ginther, K. & P.J.I.M. de Waart, 'Sustainable Development as a Matter of Good Governance: an Introductory View', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), 1.
- Ginther, K., 'Sustainable Development and Good Governance: Development and Evolution of Constitutional Orders', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 10.
- Giraud, C., 'Le droit et le principe de précaution: Leçons d'Australie', *Revue Juridique de l'Environnement* (1997-1), 21.
- Glazewski, J., 'Environmental Rights and the new South African Constitution', in A.E. Boyle & M.R. Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, Oxford, 1996), Chap. 9.
- Glennon, M.J., 'Has International Law Failed the Elephant?', 84 *AJIL* (1990), 3.
- Goedhuis, D., 'Some Recent Trends in the Interpretation and the Implementation of the Rules of International Space Law', 19 *Columbia JTL* (1981), 213.
- Goetz, A.M., 'Feminism and the Claim to Know', in R. Grant & K. Newland (eds.), *Gender & International Relations* (Open University Press, Milton Keynes, 1991), Chap. 9.
- Goldenberg, J. & R.E. Durham, 'Amazonia and National Sovereignty', 2 *International Environmental Affairs* (1992), 22.
- Goldenberg, J., 'Current Policies Aimed at Attaining a Model of Sustainable Development in Brazil', 1 *Journal of Environment and Development* (1992), 105.
- Goldie, L.F.E., 'A Note on Some Diverse Meanings of the Common Heritage of Mankind', 10 *Syracuse JIL & Commerce* (1983), 69.
- Goldie, L.F.E., 'A General View of International Environmental Law; A survey of Capabilities, Trends and Limits', in A.C. Kiss (ed.), *The Protection of Environment and International Law*, Hague Academy of International Law Workshop 1973 (Sijthoff, Leiden, 1975), 25.
- Goldwin, R.A., 'Le droit-de la mer : sens commun contre «patrimoine commun»', 89 *RGDIP* (1985), 719.
- Gordon, S., *Ladies in Limbo, The Fate of Women's Bureaux, Six Case Studies from the Caribbean* (Commonwealth Secretariat, London, 1984); updated by *Ladies in Limbo Revisited*, Record of a Workshop held in Belize, 11-15 November 1985 (Commonwealth Secretariat, London, 1985).
- Goodwin-Gill, G.S., 'Obligations of Conduct and Result', in P. Alston & K. Tomasevski (eds.), *The Right to Food* (Stichting Studie -en Informatiecentrum Mensenrechten, Utrecht, 1984), 111.

- Gormley, W.P., 'The Legal Obligation of the International Community to Guarantee a Pure and Decent Environment : The Expansion of Human Rights Norms', 3 *Georgetown IELR* (1990), 85.
- Gorove, S., 'The Concept of the Common Heritage of Mankind ; A Political, Moral, and legal Innovation ?', 9 *San Diego LR* (1972), 390.
- Graham, A., 'The Transfer of Technology : A Test Case in the North-South Dialogue', 33 *JIA* (1979), 1.
- Griffith, K.A., 'NAFTA, Sustainable Development and the Environment: Mexico's Approach', 2 *International Journal of Environment and Development* (1993), 193.
- Grolin, J., 'The Deep Seabed : A North-South Perspective', in F. Laursen (ed.), *Towards a New International Marine Order* (Nijhoff, The Hague/Boston/London, 1982), Chap. 9.
- Grossman, C. & D.D. Bradlow, 'Are We Being Propelled Towards a People-Centred Transnational Legal Order ?', 9 *American University JIL & Policy* (1993), 1.
- Gruchalla-Wesierski, T., 'A Framework for Understanding "Soft Law"', 30 *McGill LJ* (1984), 37.
- Gündling, L., 'Prior Notification and Consultation', in G. Handl & R.E. Lutz (eds.), *Transferring Hazardous Technologies and Substances : The International Legal Challenge* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1989), Chap. 3.
- Gündling, L., 'The Status in International Law of the Precautionary Action', in D. Freestone & T. Ijstra (eds.), *The North Sea : Perspectives on Regional Environmental Co-operation*, Special Issue of the International Journal of Estuarine and Coastal Law (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1990), Chap. 3.
- Gündling, L., 'Our Responsibility to Future Generations', *Agora - What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AJIL* (1990), 206.
- Gupta, J. & M. Hisschemöller, 'Issue Linkage as a Global Strategy Towards Sustainable Development. A Comparative Case Study of Climate Change', 9 *International Environmental Affairs* (1997), 289.
- Haas, P.H., 'Obtaining International Environmental Protection through Epistemic Consensus', 19 *Millennium* (1990), 347.
- Haas, P.M., 'Why Collaborate? Issue Linkage and International Regimes', 32 *World Politics* (1979-80), 357.

- Haas, P.M., & J. Sundgren, 'Evolving International Environmental Law', in N. Choucri (ed.), *Global Accord: Environmental Challenges and International Responses* (MIT, Cambridge, Massachusetts, 1993), Chap. 12.
- Hahn, R.W. & K.R. Richards, 'The Internationalization of Environmental Regulation', 30 *Harvard ILJ* (1989), 421.
- Haigh, N., 'The Introduction of the Precautionary Principle into the UK', in T. O'Riordan, & J. Cameron (eds.), *Interpreting the Precautionary Principle* (Cameron May, London, 1994), Chap. 13.
- Haigh, N., "'Sustainable Development" in the European Union Treaties', 8 *International Environmental Affairs* (1996), 87.
- Haight, G.W., 'The New International Economic Order and the Charter of Economic Right and Duties of States', 9 *International Lawyer* (1975), 591.
- Hajost, S.A., 'The Role of the United States', in L. Campiglio *et al.* (eds.), *The Environment after Rio, International Law and Economics* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994), Chap. 2.
- Hallo, R.E., 'Directive 90/313/EEC, on the Freedom of Access to Information on the Environment: Its Implementation and Implications', in R.E. Hallo (ed.), *Access to Environmental Information in Europe* (Kluwer Law International, London/The Hague/Boston, 1996), Chap. 1.
- Hammond, P.J., 'Is There Anything New in the Concept of Sustainable Development?', in L. Campiglio, *et al.* (eds.), *The Environment after Rio, International Law and Economics* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994), Chap. 13.
- Hamrin, R.D., 'A New Paradigm for Global Justice and Stewardship', 21 *Future* (1989), 608.
- Hancher, L., 'EC Environmental Policy - A Pre-cautionary Tale?', in D. Freestone & E. Hey, *Precautionary Principle in International Law* (Kluwer Law International, London/The Hague/Boston, 1996), Chap. 11.
- Handl, G., 'Territorial Sovereignty and the Problem of Transfrontier Pollution', 69 *AJIL* (1975), 58.
- Handl, G., 'Balancing the Interests and International Liability for the Pollution of International Watercourses: Customary Principles of Law Revisited', 13 *Canadian YbIL* (1975), 156.
- Handl, G., 'The Principle of 'Equitable Use' as Applied to Internationally Shared Natural Resources: Its Role in Resolving Disputes over Transfrontier Pollution', 14 *RBDI* (1978-79), 40.

- Handl, G., 'National Use of Transboundary Air Resources: The International Entitlement Issue Reconsidered', 26 *NRJ* (1986), 405.
- Handl, G., 'Protection and Development in Third World Countries: Common Destiny - Common Responsibility', 20 *New York University JIL & Politics* (1988), 603.
- Handl, G., 'International Efforts to Protect the Global Atmosphere: a Case of Too Little, Too Late?', 1 *EJIL* (1990), 250.
- Handl, G., 'Environmental Security and Global Change', in W. Lang *et al.* (eds.), *Environmental Protection and International Law* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1991), Chap. 2.
- Handl, G., 'Controlling Implementation of and Compliance with International Environmental Commitments: The Rocky Road from Rio', 5 *Colorado JIELP* (1994), 305.
- Handl, G., 'Human Rights and Protection of the Environment: A Mildly 'Revisionist' View', in A.A. Cançado Trindade (ed.), *Human Rights, Sustainable Development and the Environment*, Seminário de Brasília de 1992 (Instituto Interamericano de Derechos Humanos, Banco Interamericano de Desarrollo, San José de Costa Rica, 1995), 117.
- Handl, G., 'Sustainable Development: General Rules versus Specific Obligations', in W. Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1995), Chap. 4.
- Handl, G., 'Human Rights and the Environment', paper delivered at ILA British Branch, 'Transnational Environmental Litigation and International Perspective', Spring Conference, Nottingham, 9-10 May 1997.
- Hannum, H., 'The Protection of Indigenous Rights in the Inter-American System', in D.J. Harris & S. Livingstone (eds.), *The Inter-American Human Rights System* (Oxford University Press, Oxford, forthcoming), Chap. 7 (ref. to manuscript).
- Hardin, G., 'The Tragedy of the Commons', 162 *Science* (1968), 1243.
- Harding, R. & L. Fisher, 'The Precautionary Principle in Australia', in T. O'Riordan & J. Cameron (eds.), *Interpreting the Precautionary Principle* (Cameron May, London, 1994), Chap. 14.
- Harding, A., 'Practical Human Rights, NGOs and the Environment in Malaysia', in A.E. Boyle & M.R. Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, Oxford, 1996), Chap. 11.
- Harris, D.J., 'A Fresh Impetus for the European Social Charter', 41 *ICLQ* (1992), 659.
- Haskell, R.J., 'Abandoning Whale Conservation Initiative in *Japan Whaling Association v American Cetacean Society*', 11 *Harvard ELR* (1987), 551.

- Hassan, K., 'Moving Towards a Just International Environmental Law', in S. Bilderbeek (ed.), *Biodiversity and International Law*, the Effectiveness of International Environmental Law (IOS, Amsterdam/Washington D.C., 1992), 79.
- Hayashi, M., 'The 1994 Agreement for the Universalization of the Law of the Sea Convention', 27 *ODIL* (1996), 31.
- Hayward, P., 'The Oslo and Paris Commissions', in D. Freestone & T. Ijlstra (eds.), *The North Sea : Perspectives on Regional Environmental Co-operation*, Special Issue of the International Journal of Estuarine and Coastal Law (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1990), Chap. 8.
- Hegwood, D., 'Deep Seabed Mining : Alternative Schemes for Protecting Developing Countries from Adverse Impacts', 12 *Georgia JICL* (1982), 173.
- Henkin, L., 'Economic-Social Rights as Rights', 2 *HRLJ* (1981), 223.
- Henkin, L., 'General Course on Public International Law', 216 *RdC* (1989-IV), 9.
- Herber, B., 'The Common Heritage Principle : Antarctica and the Developing Nations', 50 *American Journal of Economics and Sociology* (1991), 391.
- Hewison, G.J., 'The Precautionary Approach to Fisheries Management : an Environmental Perspective', 11 *IJMarine & Coastal L* (1996), 301.
- Hey, E., 'The Precautionary Approach: Implications of the Revision of the Oslo and Paris Conventions', 15 *Marine Policy* (1991), 244.
- Hey, E., 'The Precautionary Concept in Environmental Policy and Law : Institutionalizing Caution', 4 *Georgetown IELR* (1992), 303.
- Hey, E. *et al.*, 'The 1992 Paris Convention on the Marine Environment of the North-East Atlantic: A Critical Analysis', 8 *IJMarine & Coastal L* (1993), 1.
- Higgins, R., 'The Legal Bases of Jurisdiction', in C.J. Olmstead (ed.), *Extra-Territorial Application of Laws and Responses Thereto* (ILA-ESC, Oxford, 1984), Chap. 3.
- Himmelstrand, K., 'Can an Aid Bureaucracy Empower Women?', in K. Staudt (ed.), *Women, International Development, and Politics, the Bureaucratic Mire* (Temple University Press, Philadelphia, 1990), Chap. 4.
- Hinds, C., 'Das Prinzip 'sic utere tuo ut alienum non laedas' und seine Bedeutung im internationalen Umweltrecht', 30 *AVR* (1992), 298.
- Hisschemsller, M., *International Positions Concerning the Greenhouse Effect*, Institute for Environmental Studies, Vrije Universiteit, Amsterdam, 1993.
- Hoelting, R.A., 'After Rio: The Sustainable Development Concept Following the United Nations Conference on Environment and Development', 24 *Georgia JICL* (1994), 117.

- Hohmann, H., 'Environmental Implications of the Principle of Sustainable Development and their Realization in International Law', in S.R. Chowdhury *et al.* (eds.), *The Right to Development in International Law* (Martinus Nijhoff, Dordrecht/Boston/London, 1992), Chap. 3.4.
- Hohmann, H., 'Ergebnisse des Erdgipfels von Rio', 12 *Neue Zeitschrift für Verwaltungsrecht* (1993), 311.
- Holder, J., 'Safe Science? The Precautionary Principle in United Kingdom Environmental Law', in J. Holder (ed.), *The Impact of EC Environmental Law in the United Kingdom*, Wiley, Chichester, 1997.
- Holst, J.J., 'Security and the Environment: A Preliminary Exploration', 20 *Bulletin of Peace Proposals* (1989), 123.
- van Hoof, G.J.H., 'The Legal Nature of Economic, Social and Cultural Rights: a Rebuttal of Some Traditional Views', in P. Alston & K. Tomasevski (eds.), *The Right to Food* (Stichting Studie -en Informatiecentrum Mensenrechten, Utrecht, 1984), 97.
- van Hoof, G.J.H., 'Legal Status of the Concept of the Common Heritage of Mankind', 7 *Grotiana New Series* (1986), 49.
- Hossain, K., 'Natural Resources: Heritage of Nation and Mankind', in A. Grahl-Madsen & J. Toman (eds.), *The Spirit of Uppsala*, Proceedings of the Joint UNITAR-Uppsala University Seminar on International Law and Organization for a New World Order (JUS 81), Uppsala, 9-18 June 1981, (Walter de Gruyter, Berlin/New York, 1984), 302.
- Hossain, K., 'Sustainable Development: A Normative Framework for Evolving a More Just and Humane International Economic Order', in S.R. Chowdhury *et al.* (eds.), *The Right to Development in International Law* (Martinus Nijhoff, Dordrecht/Boston/London, 1992), Chap. 3.2.
- Hossain, K., 'Evolving Principles of Sustainable Development and Good Governance', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 1.
- Hossain, K., 'The Rio Conference and Post-Rio-New International Economic Order', in N. Al-Nauimi & R. Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, The Hague/Boston/London, 1995), 1199.
- Housman, R.F., 'The Muted Voice: The Role of Women in Sustainable Development', 4 *Georgetown IELR* (1992), 361.
- Howard-Gordon, F. (Translation), 'Seveso is Everywhere', in L. Caldecott & S. Leland (eds.), *Reclaiming the Earth: Women Speak Out for Life on Earth* (The Women Press, London, 1983), Chap. 4.

Huber, M., 'Ein Beitrag zur Lehre von der Gebietshoheit an Grenzflüssen', 1 *Zeitschrift für Völkerrecht und Bundesstaatsrecht* (1907), 29 *et sequ.* (Part.I) and 159 *et sequ.* (Part II).

Huber, M., 'Die Soziologischen Grundlagen der Völkerrechtsordnung', *Vermischte Schriften, Gesammelter Aufsätze*, Vol. 3 (Atlantis, Zürich, 1948), 59.

Humphreys, D., 'Hegemonic Ideology an the International Tropical Timber Organisation', in J. Vogler & M.F. Imber (eds.), *The Environment & International Relations* (Routledge, London/New York, 1996), Chap. 12.

Hunt, C.D., P.A Bobeff & K.A. Palmer, 'Legal Issues Arising from the Principle of Sustainable Development: Australia, Canada and New-Zealand', 9 *Journal of Energy and Natural Resources Law* (1991), 1.

Hussain, R., 'The Antarctic : Common Heritage of Mankind ?', in J. Verhoeven *et al.* (eds.), *The Antarctic Environment and International Law* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1992), Chap. 12.

Huyser, K., 'Sustainable Development : Rhetoric and Reform at the World Bank', 4 *Transnational Law & Contemporary Problems* (1994), 253.

Hyde, J.N., 'Permanent Sovereignty over Natural Wealth and Resources', 50 *AJIL* (1956), 854.

Imber, M., 'Too Many Cooks? The Post-Rio Reform of the United Nations', 69 *JIA* (1993), 55.

Innadze, L.B., 'Common Heritage of Mankind : A Concept of Cooperation in Our Interdependent World ?', in T. Kuribayshi & E.L. Miles (eds.), *The Law of the Sea in the 1990s : A Framework for Further International Cooperation*, Proceedings of the Twenty-Fourth Annual Conference of the Law of the Sea Institute, University of Hawaii, Honolulu, 24-27 July 1990 (Law of the Sea Institute, W.S. Richardson School of Law, University of Hawaii, Honolulu, 1992), 312.

International Institute for Sustainable Development, *Our Responsibility to the Seventh Generation, Indigenous Peoples and Sustainable Development* (IISD, Winnipeg, 1992).

Itkonen, R., 'The Environment and Sustainable Development', 86 *Review of International Co-operation* (1993), 46.

Jackson, C., 'Doing What Comes Naturally? Women and Environment in Development', 21 *World Development* (1993), 1947.

Jahan, R., *Assessment of Policies and Organizational Measures in Women in Development Adopted by DAC Member Countries*, Theme 2 of the Assessement of WID Policies and Programs of DAC Members, Directorate for Development Cooperation and Humanitarian Aid, Switzerland, and United States Agency For International Development, November 1994.

- Jain, S., 'Women and People's Ecological Movement ; a Case Study of Women's Role in the Chipko Movement in Uttar Pradesh', 19 *Economic & Political Weekly* (1984), 1788.
- Jaitly, A. & N. Khanna, 'Liability for Climate Change: Who Pays, How Much and Why', 1 *RECIEL* (1992), 453.
- Jans, J.H., 'Legal Protection in European Environmental Law: An Overview', in H. Somsen (ed.), *Protecting the European Environment: Enforcing EC Environmental Law* (Blackstone, London, 1996), Chap. 5.
- Jenkins, L., 'Trade Sanctions: Effective Enforcement Tools', in J. Cameron *et al.* (eds.), *Improving Compliance with International Environmental Law* (Earthscan, London, 1996), Chap. 10.
- Jimenez de Arechaga, E., 'International Law in the Past Third of a Century', 159 *RdC* (1978-I), 297.
- Jimenez de Arechaga, E., 'Application of the Rules of State Responsibility to the Nationalization of Foreign-Owned Property', in K. Hossain (ed.), *Legal Aspects of the New International Economic Order* (Frances Pinter/Nichols Publishing Company, London/New York, 1980), Chap. 17.
- Johnston, S., 'Sustainability, Biodiversity and International law', in M. Bowman & C. Redgwell (eds.), *International Law and the Conservation of Biological Diversity*, (Kluwer Law International, London/The Hague/Boston, 1996), Chap. 3.
- Jordan, A., 'The International Organisational Machinery for Sustainable Development: Rio and the Road Beyond', Centre for Social and Economic Research of the Global Environment Working Paper 93-11, University of East Anglia, Norwich, 1993.
- Jordan, A. & T. O'Riordan, 'The Precautionary Principle in UK Environmental Law and Policy', in T.S. Gray (ed.), *UK Environmental Policy in the 1990s*, Macmillan, Houndmills/London, 1995, Chap. 5.
- Jordan, A. & J. Werksman, 'Additional Funds, Incremental Costs and The Global Environment', 3 *RECIEL* (1994), 81.
- Jositsch, D., 'Das Konzept der nachhaltigen Entwicklung (Sustainable Development) im Völkerrecht und seine innerstaatliche Umsetzung', 11 *Umweltrecht in der Praxis* (1997), 93.
- Joyner, C.C., 'Towards a Legal Regime for the International Seabed, the Soviet Union Evolving Perspective', 15 *Virginia JIL* (1975), 871.
- Joyner, C.C., 'Legal Implications of the Concept of Common Heritage of Mankind', 35 *ICLQ* (1986), 190.
- Joyner, C.C., 'The United States and the New law of the Sea', 27 *ODIL* (1996), 41.

- Joyner, C.C. & E.A. Martel, 'Looking Back to See Ahead : UNCLOS III and Lessons for Global Commons Law', 27 *ODIL* (1996), 73.
- Joyner, C.C. & A.A. von Gustedt, 'The Turbot War of 1995: Lessons for the Law of the Sea', 11 *IJMarine & Coastal L* (1996), 425.
- Joyner, C.C. & G.E. Little, 'It's Not Nice to Fool Mother Nature ! The Mystique of Feminist Approach to International Environmental Law', 14 *Boston University ILJ* (1996), 223.
- Juda, L., 'UNCLOS III and the New International Economic Order', 7 *ODIL* (1979), 221.
- Julliard, P., 'L'affaire Banco Nacional de Cuba c/ Sabbatino', 11 *AFDI* (1965), 205.
- Just, R.A., 'Intergenerational Standing under the Endangered Species Act : Giving Back the Right to Biodiversity after *Lujan v Defenders of Wildlife*', 71 *Tulane LR* (1996), 597.
- Juste, J., 'La Convention pour la protection du milieu marin de l'Atlantique Nord-Est', 97 *RGDIP* (1992), 365.
- Kaczka, D.E., 'A Primer on the Shrimp-Sea Turtle Controversy', 6 *RECIEL* (1997), 171.
- Kaackenbeeck, G., 'La Protection Internationale des Droits Acquis', 59 *RdC* (1937-I), 321.
- Kahn, R.W., & K.R. Richards, 'The Internationalization of Environmental Regulation', 30 *Harvard ILJ* (1989), 421.
- Kamto, M., 'Les nouveaux principes du droit international de l'environnement', *Revue Juridique de l'Environnement* (1993-1), 20.
- Katumba & Akute, 'Greening Takes Root', in 4/9 -1/93 *Women in Action, Women in Sustainable Development* (1993), 49.
- Kavka, G.S., 'The Futurity Problem', in R.I. Sikora & B. Barry (eds.), *Obligations to Future Generations* (Temple University Press, Philadelphia, 1978), 180.
- Kavka, G.S. & V. Warren, 'Political Representation for Future Generations', in R. Elliot & A. Gare (eds.), *Environmental Philosophy, A Collection of Readings* (The Open University Press, Milton Keynes, 1983), 21.
- Kelsen, H., 'Théorie générale du droit international public : problèmes choisis', 42 *RdC* (1932-IV), 118.
- Kennan, G., 'To Prevent a World Wasteland', 48 *Foreign Affairs* (1970), 401.
- Kewenig, W.A., 'Common Heritage of Mankind - politischer Slogan oder völkerrechtlicher Schlüsselbegriff?', in I. von München (ed.), *Staatrecht-Völkerrecht-*

- Europarecht : Festschrift für Hans-Jürgen Schlochauer* (Walter de Gruyter, Berlin, 1981), 235.
- Keyuan, Z., 'The Common Heritage of Mankind and the Antarctic Treaty System', 38 *Netherlands ILR* (1991), 173.
- Kingsbury, B., 'The Tuna-Dolphin Controversy, the WTO and the Liberal Project to Reconceptualize International Law', 5 *YbIEL* (1994), 1.
- Kingsbury, B., 'Environment and Trade: The GATT/WTO Regime in the International Legal System', in A.E. Boyle (ed.), *Environmental Regulation and Economic Growth* (Clarendon, Oxford, 1994), Chap. 9.
- King, J.R., 'The Law and Practice of Joint Implementation', 6 *RECIEL* (1997), 62.
- King Gamble, J. & M. Frankowska, 'The Significance of Signature of the 1982 Montego Bay Convention on the Law of the Sea', 14 *ODIL* (1984), 121.
- Kirgis, F.L., 'Technological Challenge to the Shared Environment: United States Practice', 66 *AJIL* (1972), 290.
- Kirgis, F.L., 'Standing to Challenge Human Endeavours that Could Change the Climate', 84 *AJIL* (1990), 525.
- Kiss, A.C., 'La Convention pour la Protection de la Mer Méditerranée contre la Pollution', *Revue Juridique de l'Environnement* (1977-2), 151.
- Kiss, A.C., 'La Notion de Patrimoine Commun de l'Humanité', 175 *RdC* (1982-II), 99.
- Kiss, A.C., 'Dix ans après Stockholm. Une décennie de droit international de l'environnement', 28 *AFDI* (1982), 784.
- Kiss, A.C., 'Le règlement des différends dans les conventions multilatérales relatives à la protection de l'environnement', in R.J. Dupuy (ed.), *The Settlement of Disputes on the New Natural Resources*, Hague Academy of International Law Workshop 1982 (Martinus Nijhoff, The Hague/Boston/London, 1983), 119.
- Kiss, A.C., 'Abuse of Rights', in R. Bernhardt (ed.), *Encyclopedia of Public International Law*, Instal. 7 (North-Holland, Amsterdam/New York/Oxford, 1984), 1.
- Kiss, A.C., 'Le droit international de l'environnement, un aspect du droit international de l'avenir ?', in R.-J. Dupuy (ed.), *The Future of International Law of the Environment*, Hague Academy of International Law Workshop 1984 (Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1985), 471.
- Kiss, A.C., 'The International Protection of the Environment', in R.St.J. Macdonald & D.M. Johnston (eds.), *The Structure and Process of International Law : Essays in Legal Philosophy, Doctrine and Theory* (Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1986), 1069.

- Kiss, A.C., 'Concluding Observations on Transboundary Air Pollution and the Emerging Concepts of International Law', in C.F. Flinterman *et al.* (eds.), *Transboundary Air Pollution: International Legal Aspects of the Co-operation of States* (Martinus Nijhoff, Dordrecht/Boston/London, 1986), Chap. 18.
- Kiss, A.C., 'Conserving the Common Heritage of Mankind', *59 Revista Jurídica de la Univerisdad de Puerto Rico* (1990), 773.
- Kiss, A.C., 'Environnement et Développement ou Environnement de Survie?', *2 JDI* (1991), 263.
- Kiss, A.C., 'Present Limits to the Enforcement of State Responsibility for Environmental Harm', in F. Francioni & T. Scovazzi, *International Responsibility for Environmental Harm* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1991), Chap. 1.
- Kiss, A.C., *Will the Necessity to Protect the Global Environment Transform the Law of International Relations ?*, Occasional Paper, Hull University Press, Hull, 1992.
- Kiss, A.C., 'The Implications of Global Change for the International Legal System', in Brown Weiss (ed.), *Environmental Change and International Law : New Challenges and Dimensions* (United Nations University Press, 1992), Chap. 10.
- Kiss, A.C., 'Concept and Possible Implications of the Right to Environment', in K.E. Mahoney & P. Mahoney, *Human Rights in the Twenty-first Century, A Global Challenge* (Martinus Nijhoff, Dordrecht/Boston/London, 1993), 551.
- Kiss, A.C., 'The Rio Declaration on Environment and Development', in L. Campiglio, *et al.* (eds.), *The Environment after Rio, International Law and Economics*, (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994), Chap. 5.
- Kiss, A.C., 'Les traités-cadres: une technique juridique caractéristique du droit international de l'environnement', *39 AFDI* (1993), 792.
- Kiss, A.C., 'La Contribution de la Conférence de Rio de Janeiro au Développement du Droit International Coutumier', in N. Al-Nauimi & R. Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, The Hague/Boston/London, 1995), 1079.
- Klabbers, J. 'The Redundancy of Soft Law', *65 Nordic JIL* (1996), 167.
- de Klemm, C., 'Le patrimoine naturel de l'humanité', in R.J. Dupuy (ed.), *The Future of International Law of the Environment*, Hague Academy of International Law Workshop 1984 (Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1985), 117.
- de Klemm, C., 'Environnement et patrimoine', in F. Ost & S. Gutwirth (eds.), *Quel avenir pour le droit de l'environnement ?*, Actes du colloque organisé par le Centre d'étude du droit de l'environnement et le *Centrum interactie recht en technologie* (Facultés Universitaires Saint-Louis, Bruxelles, 1996), 145.

- Kley-Struller, A., 'Der Schutz der Umwelt durch die Europäische Menschenrechtskonvention', 22 *Europäische Grundrechte Zeitschrift* (1995), 507.
- Koester, V., 'From Stockholm to Brundtland', 20 *EPL* (1990), 14.
- Kolasa, J., 'Some Remarks on the Concept of Resolution and Decision of International Organizations', in J. Makarczyk (ed.), *Essays in Honour of Judge Manfred Lachs* (Martinus Nijhoff, The Hague/Boston/Lancaster, 1984), 493.
- Kolossovskiy, I.G., 'Prospect for Universality of the UN Convention on the Law of the Sea', 17 *Marine Policy* (1993), 4.
- Kooijmans, P.H., 'Human Rights - Universal Panacea ? Some Reflections on the So-called Human Rights of the Third Generation', 37 *Netherlands ILR* (1990), 315.
- Korowicz, M., 'The Problem of International Personality of Individuals', 50 *AJIL* (1956), 539.
- Koskenniemi, M., 'International Liability for Transfrontier Pollution Damage', 2 *IEA* (1990), 309.
- Koskenniemi, M. & M. Lehto, 'The Privilege of Universality', 65 *Nordic JIL* (1996), 533.
- Kovar, J.D., 'A Short Guide to Rio Declaration', 4 *Colorado JIELP* (1993), 119.
- Krämer, L., 'L'Acte Unique Européen et la protection de l'environnement', *Revue Juridique de l'Environnement* (1987-4), 449.
- Krämer, L., 'La Directive 90/313/CEE sur l'accès à l'information en matière d'environnement : genèse et perspectives d'application', 353 *Revue du Marché Commun* (1991), 866.
- Krämer, L., 'Environmental Protection and Article 30 EEC Treaty', 30 *Common Market Law Review* (1993), 111.
- Krämer, L., 'Direct Effect of EC Environmental Law', in H. Somsen (ed.), *Protecting the European Environment: Enforcing EC Environmental Law* (Blackstone, London, 1996), Chap. 6.
- Kunz, J.L., 'La crise et les transformations du droit des gens', 88 *RdC* (1955-II), 4.
- Kwai-cheong, C., 'The Three Georges Project of China : Resettlement Prospects and Problems', 24 *Ambio* (1995), 98.
- Lammers, J.G., 'Balancing the Equities', in R.J. Dupuy (ed.), *The Future of International Law of the Environment*, Hague Academy of International Law Workshop 1984 (Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1985), 153.

- Lalive, J.-F., 'Contrats entre états ou entreprises étatiques et personnes privées. Développements récents', 181 *RdC* (1983-III), 9.
- Lang, W., 'die Verrechtlichung des internationalen Umweltschutzes, vom "soft law" zum "hard law"', 22 *AVR* (1984), 283.
- Lang, W., 'Luft und Ozon - Schutzobjekte des Völkerrechts', 46 *ZaöRV* (1986), 261.
- Lang, W., 'Diplomacy and International Environmental Law Making: Some Observations', 3 *YbIEL* (1992), 108.
- Lang, W., 'Auf der Suche nach einem wirksamen Klima-Regime', 31 *AVR* (1993), 13.
- Lang, W., 'From Environmental Protection to Sustainable Development : Challenges for International Law', in W. Lang (ed.), *Sustainable Development and International Law*, (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1995), Chap. 17.
- Lang, W., 'How to Manage Sustainable Development ?', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 6.
- Lang, W., 'Les mesures commerciales au service de la protection de l'environnement', 99 *RGDIP* (1995), 545.
- Lapres, D.L., 'Principles of Compensation for Nationalised Property', 26 *ICLQ* (1977), 97.
- Larschan, B. & C.B. Brennan, 'The Common Heritage of Mankind Principle in International Law', 21 *Columbia JTL* (1983), 305.
- Larson, D.L., 'The United States Position on the Deep Seabed', 3 *Suffolk TLJ* (1978-79), 1.
- Larson, D.L., 'The Reagan Administration and the Law of the Sea', 11 *ODIL* (1982), 297
- Larson, D.L., 'The Reagan Rejection of the U.N. Convention', 14 *ODIL* (1985), 337
- Larson, D.L., 'An Analysis of the Ratification of the UN Convention on the Law of the Sea', 26 *ODIL* (1995), 287.
- Lauterpacht, H., 'The Subjects of the Law of Nations', 63 *LQR* (1947), 438 (Part I) ; 64 *LQR* (1948), 97 (Part II).
- La Viña, A.G.M., 'The Right to a Sound Environment in the Philippines: The Significance of the *Minors Oposa Case*', 3 *RECIEL* (1994), 246.
- Leanza, U., 'Le régime juridique international de la mer méditerranée', 236 *RdC* (1992-V), 127.

- Leighton Schwartz, M., 'International Legal Protection for Victims of Environmental Abuse', Symposium on Earth Rights and Responsibilities: Human Rights and Environmental Protection, 18 *Yale JIL* (1993), 355.
- Lélé, S.M., 'Sustainable Development: A critical Review', 19 *World Development* (1991), 607.
- Leonard, H.J. & D. Morell, 'Emergence of Environmental Concern in Developing Countries: A Political Perspective', 17 *Stanford JIL* (1981), 281.
- Lerner, N., 'From Protection of Minorities to Group Rights', 18 *Israel Yb Human Rights* (1988), 101.
- Lévi, J.P., 'Les bons offices du Secrétaire Général des Nations Unies en faveur de l'universalité de la Convention sur le droit de la mer : la préparation de l'accord adopté par l'assemblée générale du 28 juillet 1994', 98 *RGDIP* (1994), 871.
- Lindborg, N., 'Future Role of Non Governmental Organisations in International Environmental Negotiations', in L. Susskind *et al.* (eds.), *Environmental Treaty Making* (Program Negotiations at Harvard Law School, Cambridge, Massachusetts, 1992), 1.
- Linnerooth-Bayer, J. & S. Murcott, 'The Danube River Basin: International Cooperation or Sustainable Development', 36 *NRJ* (1996), 521.
- Lipper, J., 'Equitable Utilization', in A.H. Garretson *et al.* (eds.) *The Law of International Drainage Basins* (Oceana, Dobbs Ferry, New York, 1967), Chap. 2.
- Lipschutz, R.D., 'Wasn't the Future Wonderful? Resources, the Environment and the Emerging Myth of Global Sustainable Development', 2 *Colorado JIELP* (1991), 35.
- Lipstein, K., 'International Arbitration Between Individuals and Governments and the Conflict of Laws', in B. Cheng & E.D. Brown, *Contemporary Problems of International Law: Essays in Honour of Georg Schwarzenberg on his eightieth Birthday* (Stevens & Sons, London, 1988), 177.
- Liska, M.B., 'Development of the Slovak-Hungarian Section of the Danube', in G.H. Blake *et al.* (eds.), *The Peaceful Management of Transboundary Resources* (Graham & Trotman/Martinus Nijhoff, London, 1995), Chap. 12.
- Litfin, K.T., 'Framing Science: Precautionary Discourse and the Ozone Treaties', 24 *Millennium* (1995), 251.
- Logue, J.J., 'The Nepal Proposal for a Common Heritage Fund', 9 *California Western ILJ* (1979), 598.
- Longet, M.R., 'Le cadre général du développement durable: La Conférence de Rio et Agenda 21', paper delivered at a seminar organised by the Centre d'Ecologie Humaine et des Sciences de l'Environnement/Geneva University, *Développement durable*, First Part, Geneva, 12-13 March 1998.

- Lord, K.M., 'Bootstrapping an Environmental Policy from an Economic Covenant: the Teleological Approach of the European Court of Justice', 29 *Cornell ILJ* (1996), 571.
- Lowe, V., 'Extraterritorial Jurisdiction: the Helms-Burton and D'Amato Acts', 46 *ICLQ* (1997), 378.
- Lowenfeld, A.F., 'Congress and Cuba: The Helm-Burton Act', Agora -The Cuban Liberty & Democratic Solidarity (LIBERTAD) Act, 90 *AJIL* (1996), 419.
- Lucchini, L., 'Stocks Chevauchants - Grands Migrateurs', in N. Al-Nauimi & R. Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, The Hague/Boston/London, 1995), 513.
- Luff, D., 'An Overview of International Law of Sustainable Development and A Confrontation Between WTO Rules and Sustainable Development', 29 *RBDI* (1996), 90.
- Lugten, G.L., 'Fisheries War for the Halibut', 25 *EPL* (1995), 223.
- Luthy, H., 'Passing of the European Order', 8 *Encounter* (1957), 3.
- Lynch, W.C., 'The Nepal Proposal for a Common Heritage Fund: Panacea or Pipedream?' 10 *California Western ILJ* (1980), 25.
- Lyons, D., 'The Correlativity of Rights and Duties', 4 *Noûs* (1970), 45.
- Macdonald, J., 'Appreciating the Precautionary Principle as an Ethical Evolution in Ocean Management', 26 *ODIL* (1995), 255.
- Macdonald, R.St. J., 'The Margin of Appreciation', in R.St.J. Macdonald *et al.* (eds.), *The European System for the Protection of Human Rights* (Kluwer Academic, Dordrecht/Boston/London, 1993), Chap. 6.
- Macelli, T., 'Responsibilities to Future Generations - the Scope', in S. Busuttil *et al.* (eds.), *Our Responsibilities Towards Future Generations, A Programme of UNESCO and the International Environment Institute* (Foundation for International Studies & UNESCO, Malta, 1990), 49.
- MacKay, R.A., 'The International Joint Commission between the United States and Canada', 22 *AJIL* (1928), 292.
- MacNeil, J., 'Sustainable Development, Meeting the Growth Imperative for the 21st Century', in D.J.R. Angell *et al.* (eds.), *Sustaining Earth: Response to the Environmental Threat* (Macmillan, London, 1990), Chap. 17.
- Magraw, D.B., 'Legal Treatment of Developing Countries: Differential, Contextual, and Absolute Norms', 1 *Colorado JIELP* (1990), 69.

-
- Magraw, D.B. & S. Vinogradov, 'Environmental Law', in L.F. Damrosch *et al.* (eds.), *Beyond Confrontation: International Law in the Post-Cold War Era* (Westview, Boulder, 1995), Chap. 7.
- Maguire, P., *Women in Development, an Alternative Analysis*, mimeo, Center for International Education, University of Massachusetts, Amherst, Massachusetts, 1989.
- Malanczuk, P., 'Sustainable Development: some Critical Thoughts in the Light of the Rio Conference', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 2.
- Malone, J., 'The United States and the Law of the Sea', 24 *Virginia JIL* (1984), 785.
- Mann, D.E., 'Environmental Learning in a Decentralized Political World', 44 *JIA* (1991), 301.
- Mann, F.A., 'The Doctrine of Jurisdiction in International Law', 111 *RdC* (1964-I), 1.
- Mann, F.A., 'The Doctrine of Jurisdiction Revisited After Twenty Years', 186 *RdC* (1984-III), 9.
- Mann, H., 'The Rio Declaration', in 'Issues Relating to the 1992 Brazil Conference on the Environment', 86 *ASIL Proc.* (1992), 401.
- Mann-Borgese, E., 'The New International Economic Order and the Law of the Sea', 14 *San Diego LR* (1977), 584.
- Manner, G., 'The Object Theory of the Individual in International Law', 46 *AJIL* (1952), 428.
- Manshard, W., 'New Global Environment Programmes and Sustainable Development. A Geographical Perspective', 20 *Geographical Journal* (1990), 151.
- Marek, K., 'Criminalising State Responsibility', 14 *RBDI* (1978), 460.
- Mason, R., 'Joint Implementation and the Second Sulphur Protocol', 4 *RECIEL* (1995), 296.
- Matsui, Y., 'The Road to Sustainable Development: Evolution of the Concept of Development in the UN', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 3.
- Mau, S.D., 'Equity, the Third World and the Moon Treaty', 8 *Suffolk TLJ* (1984), 221.
- M'Baye, K., 'Le Droit au développement comme un droit de l'homme', 5 *Revue des Droits de l'Homme* (1972), 503.
- Meltzer, E., 'Global Overview of Straddling and Highly Migratory Fish Stocks: The Nonsustainable Nature of High Seas Fisheries', 25 *ODIL* (1994), 255.

- Mendelson, M., 'The Legal Character of General Assembly Resolutions: Some Considerations of Principle', in K. Hossain (ed.), *Legal Aspects of the New International Economic Order* (Frances Pinter/Nichols Publishing Company, London/New York, 1980), Chap. 4.
- Menon, P.K., 'States, International Organizations and Individuals as Subjects of International Law', 20 *The Korean Journal of Comparative Law* (1992), 97.
- Mensah, C.K., 'The Role of Developing Countries', in L. Campiglio *et al.* (eds.), *The Environment after Rio, International Law and Economics* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994), Chap. 4.
- McAllister, B.B.A., 'The United Nations Conference on Environment and Development : An Opportunity to Forge a New Unity in the World of the World Bank Among Human Rights, the Environment, and Sustainable Development', 16 *Hastings ICLR* (1993), 689.
- McCaffrey, S.C., 'The Harmon Doctrine One Hundred Years Later. Buried, Not Praised', 36 *NRJ* (1996), 725.
- McClearly, R.M., 'The International Community's Claim to Rights in Brazilian Amazonia', 39 *Political Studies* (1991), 69.
- McDorman, T.L., 'International Trade Law Meets International Fisheries Law : the Canada-US Salmon and Herring Dispute', 7 *Journal of International Arbitration* (1990), 107.
- McDorman, T.L., 'The Gatt Consistency of US Fish Import Embargoes to Stop Driftnet Fishing and Save Whales, Dolphins and Turtles', 14 *George Washington JIL & Economics* (1990-91), 477.
- McGoldrick, D., 'Sustainable Development and Human Rights : An Integrated Conception', 45 *ICLQ* (1996), 796.
- McIntyre, O. & T. Mosedale, 'The Precautionary Principle as a Norm of Customary International Law', 9 *Journal of Environmental Law* (1997), 221.
- Mellor, M., 'Green Politics : Ecofeminist, Ecofeminine, or Ecomasculine', 1(2) *Environmental Politics* (1992), 229.
- Meng, W.P., 'The Hormone Conflict between the EEC and the United States within the Context of the Gatt', 11 *Michigan JIL* (1990), 819.
- Meron, T., 'On Hierarchy of International Human Rights', 80 *AJIL* (1986), 1.
- Merrills, J.G., 'Environmental Protection and Human Rights : Conceptual Aspects', in A.E. Boyle & M.R. Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, Oxford, 1996), Chap. 2.

Merryman, J.H., 'Ownership and Estate (Variations on a theme by Lawson)', 48 *Tulane LR* (1974), 916.

M'Gonigle, R.M., 'Developing Sustainability and the Emerging Norms of International Environmental Law: the Case of Land-Based Marine Pollution Control', 28 *Canadian YbIL* (1990), 169.

Mickelson, K., 'Seeing the Forest, the Trees and the People: Coming to Terms with Developing Country Perspectives on the Proposed Global Forests Convention', in Canadian Council on International Law (ed.), *Global Forests and International Environmental Law* (Kluwer Law International, London/The Hague/Boston, 1996), Chap. 6.

Miller, D.L., 'Panacea or Problem? The Proposed International Code of Conduct for Technology Transfer', 33 *JIA* (1979), 43.

von Moltke, K., 'The *Vorsorgeprinzip* in West German Environmental Policy', in Royal Commission on Environmental Pollution, *Twelfth Report: Best Practicable Environmental Option*, HMSO, London, 1988, Appendix 3.

Montini, M., 'The Nature of the Necessity and Proportionality Principles in the Trade and Environment Context', 6 *RECIEL* (1997), 121.

Morgan, E.P., 'Stockholm: the Clean (but Impossible) Dream', 8 *Foreign Policy* (1972), 149.

Morley Jr, L.F., 'Note: Whaling Regulation - Pelly and Packwood-Magnuson Amendments - Supreme Court Upholds Political Compromise of International Whaling Policy' - *Japan Whaling Association v. American Cetacean Society*, 106 S Ct 2860 (1988), 11 *Suffolk TLJ* (1987), 287.

Morse, E.L., 'Managing International Commons', 31 *JIA* (1977), 1.

Moser, C., 'Gender planning in the Third World: Meeting Practical and Strategic Needs', 17 *World Development* (1989), 1799.

Mosler, H., 'Subjects in International Law', in R. Bernhardt (ed.), *Encyclopedia of Public International Law*, Instal. 7 (North-Holland, Amsterdam/New-York/Oxford, 1984) 442.

Muldoon, J.B., 'The Development of Group Rights', in J.A. Sigler (ed.), *Minority Rights, A Comparative Analysis* (Greenwood Press, Westport, Connecticut/London, 1983) Chap. 3.

Müller, R., & M. Müller, 'Co-operation as a Basic Principle of Legal Régime for Areas Beyond National Sovereignty - With Special Regard to Outer Space Law', 31 *German YbIL* (1988), 553.

- Mullerson, R.A., 'Human Rights and the Individual as Subject of International Law : A Soviet View', 1 *EJIL* (1990), 33.
- Munasinghe, M., *Environmental Economics and Sustainable Development*, World Bank Environment Paper No. 3, World Bank, Washington D.C., 1994.
- Munn, R.E., 'Toward Sustainable Development, An Environmental Perspective', 2 *Development, Journal of SID* (1989), 70.
- Munn, R.E., 'Toward Sustainable Development', 26 *Atmospheric Environment* (1992), 2725.
- Myers, D.S., 'Is There a «Common Heritage of Mankind» ?', *Proceedings of the 31th Colloquium on the Law of Outerspace* (1990), 335.
- Myers, N., 'Environment and Security', 74 *Foreign Policy* (1989), 23.
- Myers, N., 'The Anatomy of Environmental Action: the Case of Tropical Deforestation', in A. Hurrell & B. Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, Oxford, 1992), Chap. 16.
- Nagy, B., 'Divert or Preserve the Danube? Answers 'in Concrete' - a Hungarian Perspective on the Gabčíkovo-Nagymaros Dam Dispute', 5 *RECIEL* (1996), 138.
- Nanda, V. P. & W.K. Ris, Jr., 'The Public Trust Doctrine: A Viable Approach to International Environmental Protection', 5 *Ecology LQ* (1975/76), 291.
- Nanda, V. P., 'International Environmental Protection and Developing Countries' Interests: the Role of International Law', 26 *Texas ILJ* (1991), 497.
- Narveson, J., 'Future People and Us', in R.I. Sikora & B. Barry (eds.), *Obligations to Future Generations* (Temple University Press, Philadelphia, 1978), 38.
- Nayar, R.J. & D. Mohan Ong, 'Developing Countries, 'Development' and the Conservation of Biological Diversity', in M. Bowman & C. Redgwell (eds.), *International Law and the Conservation of Biological Diversity* (Kluwer Law International, London/The Hague/Boston, 1996), Chap. 12.
- Netheim, G., 'Peoples' and 'Populations': Indigenous People and the Rights of Peoples', in Crawford (ed.), *The Rights of Peoples* (Clarendon, Oxford, 1988), Chap. 7.
- Nettesheim, M., 'Die ökologische Intervention, Gewalt und Druck zum Schutz der Umwelt? ', 34 *AVR* (1996), 168.
- Nickel, J.W., 'The Human Right to a Safe Environment : Philosophical Perspectives on its Scope and Justification', Symposium on Earth Rights and Responsibilities : Human Rights and Environmental Protection, 18 *Yale JIL* (1993), 281.

Nollkaemper, A., 'The Precautionary Principle in International Environmental Law: What's New under the Sun?', 22 *MP Bull.* (1991) 107.

Nørgaard, R., 'Sustainable Development: a Co-Evolutionary View', 20 *Futures* (1988), 606.

Norton, B.G., 'Intergenerational Equity and Environmental Decisions: A Model Using Rawls' Veil of Ignorance', 1 *Ecological Economics* (1989), 137.

Note: 'New Perspectives on International Environmental Law', 82 *Yale LJ* (1973), 1658.

November, M.A., 'Les Applications du développement durable et l'Agenda 21 local', paper delivered at a seminar organised by the Centre d'Ecologie Humaine et des Sciences de l'Environnement/Geneva University, *Développement durable*, First Part, Geneva, 12-13 March 1998.

Oberthür, S., 'Discussions on Joint Implementation and the Financial Mechanism', 23 *EPL* (1993), 245.

O'Connell, M.E., 'Enforcing the New International Law of the Environment', 35 *German YbIL* (1992), 293.

O'Keefe, P.J., 'The United Nations and Permanent Sovereignty over Natural Resources', 8 *JWTL* (1974), 239.

Opsahl, T., 'The Human Rights Committee', in P. Alston (ed.), *The United Nations and Human Rights* (Clarendon, Oxford, 1992), Chap. 10.

O'Riordan, T., 'The new Environmentalism and Sustainable Development', 108 *The Science of the Total Environment* (1991), 5.

O'Riordan, T., *Interpreting the Precautionary Principle*, Centre for Social and Economic Research of the Global Environment Working Paper 92-03, University of East Anglia, Norwich, 1992.

O'Riordan, T. & J. Cameron, 'The History and Contemporary Significance of the Precautionary Principle', in T. O'Riordan & J. Cameron (eds.), *Interpreting the Precautionary Principle* (Cameron May, London, 1994), Chap. 1.

Orliange, P., 'La commission du développement durable', 39 *AFDI* (1993), 820.

Ormond, T., "'Access to Justice" for Environmental NGOs in the European Union', in S. Deimann & B. Dyssli (eds.), *Environmental Rights, Law Litigation and Access to Justice* (Cameron May, London, 1995), Chap. 6.

Orrego Vicuna, F., 'Les législations nationales pour l'exploitation des fonds des mers et leur compatibilité avec le droit international', 24 *AFDI* (1978), 810.

Oxman, B.H., 'La législation américaine sur les ressources minérales solides des fonds océaniques', 26 *AFDI* (1980), 700.

Oxman, B.H., 'The 1994 Agreement and the Convention', 88 *AJIL* (1994), 687.

Pallemaerts, M., 'International Legal Aspects of Long-Range Transboundary Air Pollution', 1 *Hague YbIL* (1988) 189.

Pallemaerts, M., 'International Environmental Law from Stockholm to Rio: Back to the Future?', 1 *RECIEL* (1992), 254, reprinted in P. Sands (ed.) *Greening International Law* (Earthscan, London, 1993), Chap. 1.

Pallemaerts, M., 'La Conférence de Rio: Grandeur ou décadence du droit international de l'environnement ?', 28 *RBDI* (1995), 175.

Palmer, G., 'An International Regime for Environmental Protection', 42 *Washington University Journal of Urban & Contemporary Law* (1992), 5.

Palmer, G., 'New Ways to Make International Environmental Law', 86 *AJIL* (1992), 259.

Panjabi, R.K.L., 'Idealism and Self-Interest in International Environmental Law: the Rio Dilemma', 23 *California Western ILJ* (1992), 177.

Panjabi, R.K.L., 'From Stockholm to Rio : A Comparison of the Declaratory Principles of International Environmental Law', 21 *Denver JILP* (1993), 215.

Pannatier, S., 'L'environnement, objet ou sujet de droit international?', in B. Schmidlin (ed.), *Personne, Société, Nature. La titularité de droits, du rationalisme juridique du XVIIe siècle à l'écologie moderne* (edns universitaires Fribourg, Fribourg/Suisse, 1996), 143.

Parfit, D., 'Overpopulation and the Quality of Life', in P. Singer (ed.), *Applied Ethics* (Oxford University Press, Oxford, 1985), Chap. X.

Pardo, A., 'The Emerging Law of the Sea', in D. Walsh (ed.), *The Law of the Sea : Issues in Ocean Resources Management* (Praeger, New York, 1977), 33.

Pardo, A., 'Law of the Sea- What Went Wrong', in R.L. Friedheim (ed.), *Managing Ocean Resources, A Primer* (Westview, Boulder, 1979), Chap. 9.

Pardo, A. & C.Q. Christol, 'The Common Interest : Tension between the Whole and the Parts', in R.St.J. Macdonald & D.M. Johnston (eds.), *The Structure and Process of International Law : Essays in Legal Philosophy, Doctrine and Theory* (Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1986), 643.

Partan, D.G., "'The Duty to Inform" in International Environmental Law', 6 *Boston University ILJ* (1989), 43.

- Partsch, K.J., 'Individuals in International Law', in R. Bernhardt (ed.), *Encyclopedia of Public International Law*, Instal. 8, North-Holland, Amsterdam/New York/Oxford, 1985, 316.
- Pasek, J., 'Obligations to Future Generations: A Philosophical Note', 20 *World Development* (1992), 513.
- Paul, J.C.N., 'International Development Agencies, Human Rights & Humane Development Projects', 17 *Denver JILP* (1988/89), 67.
- Pellet, A., 'The Functions of the Right to Development: A Right to Self-Realization', in International Third World Legal Studies Association, *Human Rights and Development*, (Third World Legal Studies, 1984), 129.
- Peters, H.J., 'The Significance of Environmental Precaution in the Environmental Impact Assessment Directive', 5 *EELR* (1996), 210.
- Peterson, A. & C. Merchant, '"Peace with the Earth": Women and the Environmental Movement in Sweden', 9 *Women's Studies International Forum* (1986), 465.
- Peterman & R.M. M'Gonigle, 'Statistical Power Analysis and the Precautionary Principle', 24 *MP Bull.* (1992), 231.
- Petsonk, C.A., 'The Role of the United Nations Environment Programme (UNEP) in the Development of International Environmental Law', 5 *American University JIL & Policy* (1990), 351.
- Pevato, P.M., 'Do Children Have a Role to Play in Environmental Protection?', 2 *IJ Children's Right* (1994), 169.
- Pevato, P.M., 'Women's Rights, the Environment and Agenda 21', 2 *Development: Journal of SID* (1994), 17.
- Picone, P., 'Obblighi reciproci ed obblighi *erga omnes* degli stati nel campo della protezione internazionale dell'ambiente marino dall'inquinamento', in V. Starace (ed.), *Diritto internazionale e protezione dell'ambiente marino* (Giuffrè, Milano, 1983), 15.
- Piddington, K.W., 'Sovereignty and the Environment: Part of the Solution or Part of the Problem?', 31 *Environment* (1989), 18.
- Pearce, D., 'An Economic Perspective on Sustainable Development', 2 *Development, Journal of SID* (1989), 17.
- Pineschi, L., 'The Antarctic Treaty System and General Rules of International Environmental Law', in F. Francioni & T. Scovazzi (eds.), *International Law for Antarctica* (Giuffrè, Milano, 1987), 187.

- Pinto, M.C.W., 'Reflections on the Term 'Sustainable Development' and its Institutional Implications', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 4.
- Pisillo-Mazzeschi, R., 'The Due Diligence Rule and the Nature of International Responsibility of States', 35 *German YbIL* (1992), 9.
- Pogge, T., 'Rawls and Global Justice', 18 *Canadian Journal of Philosophy* (1988), 227.
- Popovic, O. *et al.*, 'Sustainable Roundwood Reciprocal Frame 'RF' Structures', in S. Emmitt (ed.), *Detail Design In Architecture*, Proceedings of the International Conference held in North Hampton, 1996 (BRC, North Hampton, 1996), 175.
- Porras, I., 'The Rio Declaration : A New Basis for International Cooperation', 1 *RECIEL* (1992), 245, reproduced in P. Sands (ed.), *Greening International Law* (Earthscan, London, 1993), Chap. 2.
- Porritt, J., 'The Common Heritage : What Heritage, Common to Whom?', 1 *Environmental Values* (1992), 256.
- Porter, G., 'Post-Cold War and Global Environmental Security', 14 *Fletcher Forum of World Affairs* (1990), 332.
- Primrosch, E.G., 'The Spirit of Sustainable Development within Authoritative Decision-Making Processes', 47 *Austrian JPIL* (1994), 81.
- Primrosch, E.G., 'Das Vorsorgeprinzip im internationalen Umweltrecht', 51 *ZöR* (1996), 227.
- Pulvenis, J.F., 'The Framework Convention on Climate Change', in L. Campiglio *et al.* (eds.), *The Environment After Rio : International Law and Economics* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994), Chap. 7.
- Ramakrishna, K., 'North-South Issues, Common Heritage of Mankind and Global Climate Change', 19 *Millennium* (1990), 439.
- Raz, J., 'Legal Rights', 4 *Oxford Journal of Legal Studies* (1984), 1.
- Razavi, S., & C. Miller, *Gender Mainstreaming : A study of Efforts by UNDP, the World Bank and the ILO to Institutionalize Gender Issues*, Occasional Paper 4, UNRISD, Geneva, 1995.
- Redfern, A., 'The Arbitration Between the Government of Kuwait and Aminoil', 55 *British YbIL* (1984), 65
- Redgwell, C.J., 'Intergenerational Equity and Global Warming', in R. Churchill & D. Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1991), Chap. 3.

Redgwell, C.J., 'Life, the Universe and Everything: A Critique of Anthropocentric Rights' in A.E. Boyle & M.R. Anderson, *Human Rights Approaches to Environmental Protection* (Clarendon, Oxford, 1996), Chap. 4.

Redgwell, C.J., 'Le concept de *trust* en droit anglais', in F. Ost & S. Gutwirth (eds.), *Quel avenir pour le droit de l'environnement ?*, Actes du colloque organisé par le Centre d'étude du droit de l'environnement et le *Centrum interactie recht en technologie* (Facultés Universitaires Saint-Louis, Bruxelles, 1996), 211.

Redgwell, C.J., 'Energy and Environment: From State Sovereignty to National/International Stewardship?', Conference Paper, Aberdeen, 1996.

Redgwell, C.J., 'Treaty-Making in the Context of Environmental Concerns', Paper presented at Forum Geneva, *Multilateral Treaty-Making: The Current Status of Challenges to and Reforms Needed in the International Legislative Process*, organised by the American Society of International Law and the Institut Universitaire des Hautes Etudes Internationales, Geneva, May 16, 1998.

Rehbinder, E., 'Das Vorsorgeprinzip im Umweltpolitik', in U.E. Simonis (ed.), *Präventive Umweltpolitik* (Campus, Frankfurt/Main, 1988), 129.

Reid, H.D., 'Servitudes Internationales', 45 *RdC* (1933-III), 1.

Reisman, W.M., 'Sovereignty and Human Rights in Contemporary International Law', 84 *AJIL* (1990), 866.

Reisman, W.M., 'International Law-Making: A Process in Communication', 75 *ASIL Proc.* (1981), 101.

Rest, A., 'Implementing the Principles of Intergenerational Equity and Responsibility', 24 *EPL* (1994), 314.

Rest, A., 'Die rechtliche Umsetzung der Rio-Vorgaben in der Staatenpraxis', 34 *AVR* (1996), 145.

Rich, R., 'The Right to Development as an Emerging Human Right', 23 *Virginia JIL* (1983), 287.

Rich, R., 'The Right to Development: A Right of Peoples?', in J. Crawford (ed.), *The Rights of Peoples* (Clarendon, Oxford, 1988), Chap. 3.

Richardson, E.L., 'Climate Change: Problems of Law-Making', in A. Hurrell & B. Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, Oxford, 1992), Chap. 6.

Riedel, E., 'International Environmental Law - A Law to Serve the Public Interest? - An Analysis of the Scope of the Binding Effects of Basic Principles (Public Interest Norms)', in J. Delbrück (ed.), *New Trends in International Lawmaking - International 'Legislation' in the Public Interest* (Duncker & Humblot, Berlin, 1997), 61.

- Rigaux, F., 'Des Dieux et des Héros : Réflexions sur une sentence arbitrale', 67 *Revue Critique de Droit International Privé* (1978), 16.
- Rigaux, F., 'Le crime d'Etat. Réflexions sur l'article 19 du projet d'articles sur la responsabilité des Etats', in *Il diritto internazionale al tempo della sua codificazione. Studi in onore di Roberto Ago*, Vol. III (Giuffrè, Milano, 1987), 301.
- Riphagen, W., 'The International Concern or the Environment as Expressed in the Concepts of the "Common Heritage of Mankind" and of "Shared Natural Resources"', in M. Bothe (ed.), *Trends in Environmental Policy and Law* (IUCN, Gland, Switzerland, 1980), 343.
- Robert, E., 'L'affaire au projet Gabčíkovo-Nagymaros (Hongrie/Slovaquie), un nouveau conflit en matière d'environnement devant la Cour internationale de justice ?', XLVII *Studia Diplomatica* (1994), 17.
- Robert, E., 'L'affaire des normes américaines relatives à l'essence', 101 *RGDIP* (1997), 108.
- Robertson, D., 'The Global Environment: Are International Treaties a Distraction ?', 13 *World Economy* (1990), 111.
- Robbins, J.P. 'Environment -Endangered Species- Extraterritorial Application of the Endangered Species Act of 1973, *Defenders of Wildlife v Lujan*, 91 F.2d. 117 (8th Cir.1990), cert. granted, *Lujan v Defenders of Wildlife*, 111 S.Ct. 2008 (1991)', 21 *Georgia JICL* (1991), 575.
- Robinson, N. A., 'A Legal Perspective on Sustainable Development', in J.O. Saunders (ed.), *The Legal Challenge of Sustainable Development, Essays from the Fourth Institute Conference on Natural Resources Law* (Canadian Institute of Resource Law, Calgary, 1990), 15.
- Robinson, N. A., 'Comparative Environmental Law: Evaluating How Legal Systems Address "Sustainable Development"', 27 *EPL* (1997), 338.
- Roffe, P., 'International Code of Conduct on Transfer of Technology', 11 *JWTL* (1977), 186.
- Rogoff, M.A., 'The Obligation to Negotiate in International Law: Rules and Realities', 16 *Michigan JIL* (1994), 141.
- Roht-Arriaza, N., 'Precautionary Participation and the "Greening" of International Trade Law', 7 *J.Env'tl L. & Litigation* (1992), 57.
- Rosenfield, S.B., 'Solar Energy "The Common Heritage of Mankind"', *Proceeding of the 21st Colloquium on the Law of Outer Space* (1978), 58.
- Rosser, S.V., 'Eco-Feminism : Lessons for Feminism from Ecology', 14 *Women's Studies International Forum* (1991), 143.

- Rowlands, I.H., 'The International Politics of Environment and Development: The Post-UNCED Agenda', 21 *Millennium: Journal of International Studies* (1992), 209.
- Rowlands, I.H., 'The Climate Change Negotiations: Berlin and Beyond', 4 *JED* (1995), 145.
- Sachariew, K., 'The Definition of Thresholds of Tolerance for Transboundary Environmental Injury under International Law: Development and Present Status', 37 *Netherlands ILR* (1990), 193.
- Salter, J.R., 'Environment, Sustainable Development and the Responsibilities of the Legal Profession', 16 *International Legal Practitioner* (1991), 75.
- Sambon, J., 'L'usufruit, un modèle pour le droit d'usage du patrimoine environnemental', in F. Ost & S. Gutwirth (eds.), *Quel avenir pour le droit de l'environnement ?*, Actes du colloque organisé par le Centre d'étude du droit de l'environnement et le *Centrum interactie recht en technologie* (Facultés Universitaires Saint-Louis, Bruxelles, 1996), 173.
- Sand, P.H., 'International Law on the Agenda of the United Nations Conference on Environment and Development : Towards Global Environmental Security ?', 60 *Nordic JIL* (1991), 5.
- Sand, P.H., 'Transnational Environmental Disputes', in D. Bardonnet (ed.), *The Peaceful Settlement of International Disputes in Europe: Future Prospects*, Hague Academy of International Law Workshop 1990 (Martinus Nijhoff, Dordrecht/Boston/London, 1991), Chap. 7.
- Sand, P.H., 'UNCED and the Development of International Environmental Law', 3 *YbIEL* (1992), 3.
- Sand, P.H., *Trusts for the Earth, New Financial Mechanisms for International Environmental Protection*, Occasional Paper, Hull University Press, Hull, 1994 ; also 'Trusts for the Earth, New Financial Mechanisms for Sustainable Development', in W. Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1995), Chap. 11.
- Sand, P.H., 'International Economic Instruments for Sustainable Development: Sticks, Carrots and Games', 26/2 *Indian JIL* (1996), 1.
- Sands, P., 'Transboundary Nuclear Pollution : International Legal Issues', in P. Sands (ed.), *Chernobyl : Law and Communication* (Grotius, Cambridge, 1988), Introduction.
- Sands, P., 'The Environment, Community and International Law', 30 *Harvard ILJ* (1989), 393.
- Sands, P., 'The Role of Non-Governmental Organizations in Enforcing International Environmental Law', in W.E. Butler (ed.), *Control over Compliance with International Law* (Martinus Nijhoff, Dordrecht/Boston/London, 1991), 61.

- Sands, P., 'Danish Bottles and Mexican Tuna', 1 *RECIEL* (1992), 28.
- Sands, P., 'Enforcing Environmental Security', in P. Sands (ed.), *Greening International Law* (Earthscan, London, 1993), Chap. 4; reprinted in J. Kirkby *et al.* (eds.), *The Earthscan Reader in Sustainable Development* (Earthscan, London, 1995), 259.
- Sands, P., 'Applying EC Environmental Law : Obstacles to Citizen Enforcement', A Report from the Dicey Conference, Oxford, 15-16 March 1994.
- Sands, P., 'Liability for Environmental Damage', in UNEP (ed.), *UNEP's New Way Forward : Environmental Law and Sustainable* (UNEP, Nairobi, 1995), Chap. 6.
- Sands, P., 'International Law in the Field of Sustainable Development', 65 *British YbIL* (1994), 303; reproduced with some modifications under the title 'International Law in the Field of Sustainable Development : Emerging Legal Principles', in W. Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1995), Chap. 5.
- Sands, P., 'Protecting Future Generations : Precedents and Practicalities', Working Draft, FIELD, London, 1994; reproduced with some modifications in E. Agius, *et al.* (eds.), *Future Generations and International Law* (Earthscan, London, 1998), Chap. 8.
- Sands, P., 'Compliance with International Environmental Obligations: Existing International Legal Arrangements', in J. Cameron (ed.), *Improving Compliance with International Environmental Law* (Earthscan, London, 1996), Chap. 3.
- Sands, P., 'Human Rights, Environment and the *Lopez-Ostra* Case : Context and Consequences', 6 *EHRLR* (1996), 597.
- Sands, P., 'The European Court of Justice: An Environmental Tribunal?', in H. Somsen (ed.), *Protecting the European Environment: Enforcing EC Environmental Law* (Blackstone, London, 1996), Chap. 1.
- Sands, P., 'L'affaire des essais nucléaires II (Nouvelle-Zélande c. France) : Contribution de l'instance au droit international de l'environnement', 102 *RGDIP* (1997), 447.
- Sands, P. & L. Bulatao, *International Procedural Aspects of Atmospheric Protection : Environmental Impact Assessment and Access to Information*, CIEL Background Papers on International Environmental Law No.2/1991, Center for International Law, School of Law, King's College London, 1991.
- Sands, P. & L. Bulatao, *Financial Mechanisms for the Climate Change Convention*, CIEL/AOSIS Background Paper 3/1991, Center for International Environmental Law, School of Law, King's College, London, June 1991.
- Sands, P. & J. Werksman, 'Procedural Aspects of International Law in the Field of Sustainable Development : Citizens' Rights', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 12.

- Saunders, J.O., 'The Path to Sustainable Development: A Role for Law', in J.O. Saunders (eds.), *The Legal Challenge of Sustainable Development, Essays from the Fourth Institute Conference on Natural Resources Law* (Canadian Institute of Resource Law, Calgary, 1990), 1.
- Saunders, M.B., 'Valuation and International Regulations of Forest Ecosystems: Prospects for a Global Forest Agreement', 66 *Washington LR* (1991), 871.
- Sauser-Hall, G., 'L'utilisation industrielle de fleuves internationaux', 83 *RdC* (1953-II) 465.
- Sax, J.L., 'The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention', 68 *Michigan LR* (1969-1970), 471.
- Sell, S. 'North-South Environmental Bargaining: Ozone, Climate Change and Biodiversity', 2 *Global Governance* (1996), 97.
- Serracino Inglott, P., 'The Rights of Future Generations: Some Socio-Philosophical Considerations', in S. Busuttil *et al.* (eds.), *Our Responsibilities Towards Future Generations, A Programme of UNESCO and the International Environment Institute* (Foundation for International Studies & UNESCO, Malta, 1990), 17.
- Serracino Inglott, P., 'The Common Heritage and the Rights of Future Generations', in S. Busuttil *et al.* (eds.), *Our Responsibilities Towards Future Generations, A Programme of UNESCO and the International Environment Institute* (Foundation for International Studies & UNESCO, Malta, 1990), 67.
- Scelle, G., 'Règles générales du droit de la paix', 46 *RdC* (1933-IV), 327.
- Schally, H.M., 'Forests: Towards an International Legal Regime?' 4 *YbIEL* (1993), 30.
- Schachter, O., 'The Twilight Existence of Nonbinding International Agreements', 71 *AJIL* (1977), 296.
- Schachter, O., 'The Emergence of International Environmental Law', 44 *JIA* (1991), 457.
- Schiffman, H.S., 'The Protection of Whales in International Law: Perspective for the Next Century', 22 *Brooklyn JIL* (1996), 303.
- Schloss, M., 'Energy, the Environment and Sustainable Development: Lateral Departures', 5 *World Resources Review* (1993), 214.
- Schoenbaum, T.J., 'Free International Trade Protection of the Environment: Irreconcilable Conflict?', *Agora - Trade and Environment*, 86 *AJIL* (1992), 700.
- Schrijver, N., 'Permanent Sovereignty over Natural Resources versus the Common Heritage of Mankind', in P. de Waart *et al.* (eds.), *International Law and Development* (Martinus Nijhoff, Dordrecht/Boston/London, 1988), 87.

- Schrijver, N., 'International Organisation for Environmental Security', 20 *Bulletin of Peace Proposals* (1989), 115.
- Schrijver, N., 'The Dynamics of Sovereignty in a Changing World', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 5.
- Schröder, M., 'Sustainable Development - Ausgleich zwischen Umwelt und Entwicklung als Gestaltungsaufgabe der Staaten', 34 *AVR* (1996), 251.
- Schwabach, C.A., Note: 'The Sandoz Spill: The failure of International Law to Protect the Rhine from Pollution', 16 *Ecology LQ* (1989), 443.
- Schwartz, T., 'Obligations to Posterity', in R.I. Sikora & B. Barry (eds.), *Obligations to Future Generations* (Temple University Press, Philadelphia, 1978), 3.
- Schwarzenberger, G., 'International *Jus Cogens* ?', 43 *Texas LR* (1969), 455.
- Schwebel, S.S., 'The Story of the UN's Declaration on Permanent Sovereignty over Natural Resources', 49 *American Bar Association Journal* (1963), 463.
- Schwelb, E., 'Actio Popularis and International Law', 2 *Israel Yb on Human Rights* (1972), 46.
- Schwelb, E., 'The Law of Treaties and Human Rights', 16 *AVR* (1974/75), 1.
- Scott, R. Jr., 'Environmental Ethics and Obligations to Future Generations', in R.I. Sikora & B. Barry (eds.), *Obligations to Future Generations* (Temple University Press, Philadelphia, 1978), 74.
- Scovazzi, T., 'Fondi marini e patrimonio comune dell'umanità', 67 *Rivista di Diritto Internazionale* (1984), 249
- Scovazzi, T., 'Sul principio precauzionale nel diritto internazionale dell'ambiente', 75 *Rivista di Diritto Internazionale* (1992), 699.
- Sharma, S.D., 'Building Effective International Environmental Regimes : The Case of the Global Environmental Facility', 5 *Journal of Environment & Development* (1996), 73.
- Sheate, W.R., 'Amending the EC Directive (85/337/EEC) on Environmental Impact Assessment', 2 *Environmental Law Network International Newsletter* (1994), 17.
- Shelton, D., 'Human Rights, Environmental Rights, and the Right to the Environment', 38 *Stanford JIL* (1991), 103.
- Shelton, D., 'Environmental Rights in the European Community', 16 *Hastings ICLR* (1993), 557.
- Shelton, D., 'Human Rights, Environmental Rights, and the Right to the Environment', 38 *Stanford JIL* (1991), 103.

- Shelton, D., 'What Happened in Rio to Human Rights?', 3 *YbIEL* (1992), 75.
- Shibata, A., 'International Law-Making Process in the United Nations : A Comparative Analysis of UNCED and UNCLOS III', 24 *California Western ILJ* (1993), 17.
- Shihata, I.F.I., 'The World Bank and Human Rights : An Analysis of the Legal Issues and Record of Achievements', 17 *Denver JIL* (1988), 39.
- Shutkin, W.A., 'International Human Rights Law and the Earth : the Protection of Indigenous Peoples and the Environment', 31 *Virginia JIL* (1991), 479.
- Sicault, J.-D. & A.C. Kiss, 'La Conférence des Nations Unies sur l'environnement (Stockholm, 5-16 juin 1972)', 18 *AFDI* (1972), 603.
- Sibert, M., 'La guerre civile d'Espagne et les droits des particuliers', 44 *RGDIP* (1937), 505.
- Side, J., 'The Future of North Sea Oil Industry Abandonment in the Light of the Brent Spar Decision', 21 *Marine Policy* (1997), 45.
- Sieghart, P., 'Economic Development, Human Rights and the Omelette Thesis', 1 *Denver Policy Review* (1983), 1.
- Sikora, R.I., 'Is It Wrong to Prevent the Existence of Future Generations?', in R.I. Sikora & B. Barry (eds.), *Obligations to Future Generations* (Temple University Press, Philadelphia, 1978), 112.
- Simoes Ferreira, P., 'The Role of African States in the Development of the Law of the Sea of the Third UN Conference', 7 *ODIL* (1979), 89.
- Simon, D., 'Sustainable Development: Theoretical Goal Construct of Attainable Goal?', 16 *Environmental Conservation* (1989), 41.
- Singh, N., 'Sustainable Development as a Principle of International Law', in P. De Waart *et al.* (ed.), *International Law and Development* (Martinus Nijhoff, Dordrecht/Boston/London, 1988), Chap. 1.1.
- Skubiszewski, K., 'A New Source of the Law of Nations: Resolutions of International Organisations', in *Recueil d'études de droit international en hommage à Paul Guggenheim* (Faculté de Droit de l'Université de Genève & IUHEI, Genève, 1968), 508.
- Slinn, P., 'Implementation of International Obligations towards Developing States : Equality or Preferential Treatment?', in W.E. Butler, (ed.), *Control over Compliance with International Law* (Martinus Nijhoff, Dordrecht/Boston/London, 1991), 165.
- Slinn, P., 'Development Issues : the International Law of Development and Global Climate Change', in R. Churchill & D. Freestone (eds.), *International Law and Global Climate Change* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1991), Chap. 5.

- Sloan, F. B., 'The Binding Force of a Recommendations of the General Assembly of the United Nations', 25 *British YbIL* (1948), 3.
- Sloan, F. B., 'General Assembly Resolutions Revisited', 58 *British YbIL* (1987), 39.
- Smets, H., 'The Polluter Pays Principles in the Early 1990s', in L. Campiglio, *et al.* (eds.), *The Environment after Rio, International Law and Economics* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994), Chap. 9.
- Smith, D.N & L.T. Wells, 'Mineral Agreements in Developing Countries : Structures & Substance', 69 *AJIL* (1975), 560.
- Smith, S., 'Environment on the Periphery of International Relations: An Explanation', 2 *Environmental Politics* (1993), 28.
- Sohn, L.B., 'The Stockholm Declaration on Human Environment', 14 *Harvard ILJ* (1973), 433.
- Sohn, L.B., 'The New International Law : Protection of the Rights of Individuals Rather than States', 32 *American University LR* (1982), 1.
- Sohnle, J., 'Irruption du droit de l'environnement dans l'affaire de la C.I.J.: l'affaire Gabcikovo-Nagymaros', 102 *RGDIP* (1998), 885.
- Song, Y.S., 'Common Heritage of Mankind as a Customary International Norm', 8 *Korea World Affairs* (1984), 665.
- Sperduti, G., 'L'individu et le droit international', 90 *RdC* (1956-II), 727.
- Spiry, E., 'Protection de l'environnement et droit international des droits de l'homme - de la dialectique à la symbiose', 74 *Revue de droit international de sciences diplomatiques & politiques* (1996), 169.
- Spiropoulos, J., 'L'individu et le droit international', 30 *RdC* (1929-V), 195.
- Spirou, C.D.C., 'Une lacune du droit civil: Le Trust', 45 *Revue Hellénique de Droit International* (1992), 195.
- Stairs K. & P. Taylor, 'Non-Governmental Organizations and the Legal Protection of the Oceans : A Case Study', in A. Hurrell & B. Kingsbury (eds.), *The International Politics of the Environment* (Clarendon, Oxford, 1992), Chap. 4.
- Stebbing, A.R.D., 'Environmental Capacity and The Precautionary Principle', 24 *MPBull.* (1992), 287.
- Steeten, P., 'What Do We Owe the Future ?', 12 *Resources Policy* (1986), 4.

- Steiner, H.J., 'International Law, Doctrine and Schools of Thought in the Twentieth Century', in R. Bernhardt (ed.), *Encyclopedia of Public International Law*, Instal. 7, (North-Holland, Amsterdam/New York/Oxford, 1984), 297.
- Steiner, H.J., 'Political Participation as a Human Right', 1 *Harvard Human Rights Yearbook* (1989), 77.
- Steiger, H. (Rapporteur), *The Right to a Humane Environment: Proposal for an Additional Protocol to the European Human Rights Convention*, Beiträge zur Umweltgestaltung Heft A 13, Erich Schmidt, Berlin, 1973.
- Stokke, O., 'Sustainable Development: A Multi-Faceted Challenge', in O. Stokke (ed.), *Sustainable Development* (Frank Cass, London, 1991), 8.
- Stone, C., 'Should Trees Have Standing?', 45 *Southern California LR* (1972), 450.
- Stone, C., 'Defending the Global Commons', in P. Sands (ed.), *Greening International Law* (Earthscan, London, 1993), Chap. 3.
- Strong, M.F., 'The Challenge before the Earth Summit', 18 *Populi* (1991), 4.
- Strong, M.F., 'ECO '92: Critical Challenges and Global Solutions', 44 *JIA* (1991), 287.
- Sucharitkul, S., 'Évolution continue d'une notion nouvelle: le patrimoine commun de l'humanité', in Y. Dinstein (ed.), *International Law at a Time of Perplexity: Essays in Honour of Shabtai Rosenne* (Martinus Nijhoff, Dordrecht/Boston/London, 1989), 887.
- Sullivan, M.E., 'The Three Georges Dam Project: The Need for a Comprehensive Assessment', 8 *Georgetown IELR* (1995), 109.
- Supanich, G.P., 'The Legal Basis of Intergenerational Responsibility: An Alternative View - The Sense of Intergenerational Identity', 3 *YbIEL* (1992), 94.
- 'Sustainable Development: the Challenge to International Law', Report of A Consultation Convened by the Foundation for International Environmental Law and Development with the support of the Ford Foundation, St. George's House, Windsor Castle, England, 27-29 April 1993; reproduced in 2 *RECIEL* (1993), r.1.
- Suy, E., 'Antarctica: Common Heritage of Mankind?', in J. Verhoeven *et al.* (eds.), *The Antarctic Environment and International Law* (Graham & Trotman/Martinus Nijhoff, Dordrecht/Boston/London, 1992), Chap. 13.
- Szekely, A., 'The Legal Protection of the World's Forests after Rio '92', in L. Campiglio, *et al.* (eds.), *The Environment after Rio, International Law and Economics*, (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994), Chap. 6.
- Tahindro, A., 'Conservation and Management of Transboundary Fish Stocks: Comments in Light of the Adoption of the 1995 Agreement for the Conservation and

- Management of Straddling Fish Stocks and Highly Migratory Fish Stocks', 28 *ODIL* (1997), 1.
- Tamiotti, L., 'L'ingérence écologique: un concept', in F. Sabelli (ed.), *Ecologie contre nature* (Presses Universitaires de France/Nouveau cahiers de l'IUED, Paris/Geneva, 1995), 159.
- Tanzi, A., 'Is Damage a Distinct Condition for the Existence of an Internationally Wrongful Act?', in M. Spindi & B. Simma, *United Nations Codification of State Responsibility* (Oceana, New York/London/Rome, 1987), 1.
- Tanzi, A., 'La Convenzione di New-York sui corsi d'acqua internazionali', 80 *Rivista di Diritto Internazionale* (1997), 956.
- Tarasofsky, R.G., 'Ensuring Compatibility Between Multilateral Environmental Agreements and GATT/WTO', 7 *YbIEL* (1996), 52.
- Tarasofsky, R.G., 'The Relationship Between the TRIPs Agreement and the Conventions on Biological Diversity: Towards a Pragmatic Approach', 6 *RECIEL* (1997), 148.
- Tauli-Corpuz, V., 'Indigenous Women, and Sustainable Development', 4/92-1/93 *Women in Action, Women in Sustainable Development* (1993), 56.
- Thacher, P.S., 'Serving Future Generations', in R.J. Dupuy (ed.), *The Future of International Law of the Environment*, Hague Academy of International Law Workshop 1984 (Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1985), 451.
- Thompson, D., 'The UNCTAD Code on Transfer of Technology', 16 *JWTL* (1982), 311.
- Thorne, M., 'Establishing Environment as a Human Right', 19 *Denver JILP* (1991), 301.
- Thornberry, P., 'Is There a Phoenix in the Ashes ? - International Law and Minority Rights', 15 *Texas ILJ* (1980), 421.
- Timoshenko, A.S., 'Ecological Security : Global Change Paradigm', 1 *Colorado JIELP* (1990), 127.
- Timoshenko, A.S., 'Control Machinery in the Ecological Security System', in W.E. Butler, (ed.), *Control over Compliance with International Law* (Martinus Nijhoff, Dordrecht/Boston/London, 1991), 51.

- Timoshenko, A.S., 'Ecological Security : Response to Global Challenge', in E. Brown Weiss (ed.), *Environmental Change and International Law : New Challenges* (United Nations University Press, Tokyo, 1992), Chap. 13.
- Timoshenko, A.S., 'From Stockholm to Rio : the Institutionalization of Sustainable Development', in W. Lang (ed.), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1995), Chap. 10.
- Tinker, C., '«Environmental Security» in the United Nations : Not a Matter for the Security Council', 59 *Tennessee LR* (1992), 787.
- Tinker, C., *Making UNCED Work: Building the Legal and Institutional Framework for Sustainable Development at the Earth Summit and Beyond*, United Nations Association of the United States of America Occasional Paper No. 4, UNA-USA, New York, 1992.
- Tisdell, C., 'Sustainable Development: Differing Perspectives of Ecologists and Economists, and Relevance to LDCs', 16 *World Development* (1988), 373.
- Tolentino, A.S., 'Good Governance Through Popular Participation in Sustainable Development' in K. Ginther et al. (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 9.
- Tomuschat, C., 'Die Charta der wirtschaftlichen Rechte und Pflichten der Staaten, Zur Gestaltungskraft von Deklarationen der UN-Generalversammlung', 36 *ZaöRV* (1976), 444.
- Tomuschat, C., 'Das Recht auf Entwicklung', 25 *German YbIL* (1982), 85.
- Tomuschat, C., 'The Concluding Documents of World Conferences', in J. Makarczyk (ed.), *Theory of International Law at the Threshold of the 21st Century* (Kluwer Law International, The Hague/London/Boston, 1996), 563.
- Tong Veng Wye, 'Sustainable Development', 10 *Aliran Monthly* (1990), 26.
- Treves, T., 'Le transfer de technologie et la Conférence sur le droit de la mer', 104 *JDI* (1977), 43.
- Triggs, G., 'The Rights of 'Peoples' and Individual Rights: Conflict or Harmony?' in J. Crawford (ed.), *The Rights of Peoples* (Clarendon, Oxford, 1988), Chap. 9.
- Tripp, J.T.B., 'The UNEP Montreal Protocol: Industrialized and Developing Countries Sharing the Responsibility for Protecting the Stratospheric Ozone Layer', 20 *New York University JIL & Politics* (1988), 733.
- Trüb, H.R., 'Natural Resource Damages - A Swiss Law Perspective', 27 *EPL* (1997), 58.
- Tuchman Mathews, J., 'Redefining Security', 68 *Foreign Affairs* (1988/89-1989/90), 162.

- UNEP, *Sustainable Development and Peace*, UNEP's background paper for the 1985 Third World Conference on Women, UNEP, Nairobi, 1985.
- UNEP/PNUÉ, *Le Public et l'Environnement*, L'état de l'environnement 1988, UNEP/GC.15/17/Add.1, UNEP, Nairobi, 1988.
- UNEP, 1992 Annual Report of the Executive Director, *Twenty Years since Stockholm*, UNEP, Nairobi, 1993.
- UNEP, *Poverty and the Environment*, Preparatory Report to the 1995 World Summit on Social Development, UNEP, Nairobi, 1995.
- Vandermeersch, D., 'The Single European Act and the Environmental Policy of the European Economic Community', 12 *ELR* (1987) 407.
- Van Dyke, J.M., 'The Rio Principles and our Responsibilities of Ocean Stewardship', 31 *OCM* (1996), 1.
- Vander Zwaag, D. & D. MacKinlay, 'Towards a Global Forests Convention : Getting Out of the Woods and Barking up the Right Tree', in Canadian Council on International Law (ed.), *Global Forests and International Environmental Law* (Kluwer Law International, London/The Hague/Boston, 1996), Chap. 1.
- Vavrousek, J., 'Institutions for International Security', in J. Kirkby *et al.* (eds.), *The Earthscan Reader in Sustainable Development* (Earthscan, London, 1995), 267.
- Verdross, A., 'Règles générales du droit international de la Paix', 30 *RdC* (1929-V), 271.
- Verdross, A., 'Les règles internationales concernant le traitement des étrangers', 37 *RdC* (1931-III), 321.
- de Vey Mestdagh, K., 'The Right to Development : From Evolving Principle to 'Legal' Right : In Search of its Substance', in International Commission of Jurists, *Development, Human Rights and the Rule of Law*, Report of a Conference held in The Hague (Pergamon, Oxford/New York/Toronto/Sydney/Paris/Frankfurt, 1981), 143.
- Vinogradov, S., 'International Environmental Security: The Concept and its Implementation', in A. Carty & G.M. Danilenko (eds.), *Perestroika and International Law* (Edinburgh University Press, Edinburgh, 1990), Chap.-16.
- Virally, M., 'La deuxième décennie des Nations Unies pour le développement, essais d'interprétation para-juridique', 16 *AFDI* (1970), 9.
- Virally, M., 'La Charte des droits et devoirs économiques des États : Notes de lecture', 20 *AFDI* (1974), 57.
- Virally, M., 'Panorama du Droit International Contemporain, Cours Général de Droit International', 183 *RdC* (1983-III), 9.

- Virally, M., 'Résolutions et Accord International', in J. Makarczyk (ed.), *Essays in Honour of Judge Manfred Lachs* (Martinus Nijhoff, The Hague/Boston/Lancaster, 1984), 299.
- Virally, M., 'La valeur juridique des recommandations des organisations internationales', 2 *AFDI* (1956), 66, reproduced in M. Virally, *Le Droit International en Devenir* (PUF, Paris, 1990), 169.
- Vischer, L. (ed.), *Rights of Future Generations Rights of Nature*, Studies from the World Alliance of Reformed No. 19 (World Alliance of Reformed Churches, Geneva, 1990).
- Visser't Hooft, H.Ph., 'L'avenir de la politique internationale de l'environnement de *lege ferenda*', in I. Rens & J. Jakubec (eds.), *Le droit international face à l'éthique et à la politique de l'environnement* (Georg, Geneva, 1996), 197.
- van der Vyver, J.D., 'State Sovereignty and the Environment in International Law', 109 *South African LJ* (1992), 472.
- De Waart, P.J.I.M., 'Permanent Sovereignty over Natural Resources as a Cornerstone for International Economic Rights and Duties', 14 *Netherlands ILJ* (1977), 304.
- De Waart, P.J.I.M., 'The Right to Self-Determination from a Sustainable Development Perspective', in K. Ginther *et al.* (eds.), *Sustainable Development and Good Governance* (Martinus Nijhoff, Dordrecht/Boston/London, 1995), Chap. 15.
- Waldron, J., 'Can Communal Goods be Human Rights?', 28 *European Journal of Sociology* (1987), 296.
- Warbrick, C. & D. McGoldrick, 'The Straddling Stocks Agreement of 1995 - An Initial Assessment', 45 *ICLQ* (1996), 463.
- Warren, K.J., 'Introduction to the Special Issue on Ecological Feminism', 6 *Hypatia* (1991), 1.
- Warren, M., 'Do Potential People Have Moral Rights?', in R.I. Sikora & B. Barry (eds.), *Obligations to Future Generations* (Temple University Press, Philadelphia, 1978), 14.
- Weber, S., 'Environmental Information and the European Convention on Human Rights', 12 *HRLJ* (1991), 177.
- Weekes-Vagliani, W., *The Integration of Women in Development Projects*, Development Centre Papers, OECD, Paris, 1985.
- Wheeler, M., 'The Right to Know in the European Union', 3 *RECIEL* (1994), 1.
- Weil, P., 'Towards Relative Normativity in International Law?' 77 *AJIL* (1983), 413.

- Werksman, J., 'Consolidating Governance of the Global Commons: Insights from the Global Environment Facility', 6 *YbIEL*(1995), 27.
- Westing, A.H., 'Environmental Component of Comprehensive Security', 20 *Bulletin of Peace Proposals* (1989), 129.
- Westing, A.H., 'The Atmosphere as a Common Heritage of Humankind : its Role in Environmental Security', *Scientific World* (1994), 5.
- Wildhaber, L., 'Die Ödestillieranlage Sennwald und das Völkerrecht der Grenzüberschreitenden Luftverschmutzung', 31 *ASDI* (1975), 97.
- Wirth, D.A., 'International Technology Transfer and Environmental Impact Assessment', in G. Handl & R.E. Lutz (eds.), *Transferring Hazardous Technologies and Substances : The International Legal Challenge* (Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1989), Chap. 4.
- White, R.C.A., 'Expropriation of the Libyan Concessions, Two conflicting International Arbitrations', 30 *ICLQ* (1981), 1.
- White, M.V., 'The Common Heritage of Mankind : An Assessment', 14 *Case Western Reserve JIL* (1982), 509.
- Whiteman, M.M., 'Jus Cogens in International Law, with a Projected List', 7 *Georgia JICL* (1977), 609.
- Wildhaber, L., 'Die Ödestillieranlage Sennwald unde das Völkerrecht der Grenzüberschreitenden Luftverschmutzung', 31 *ASDI* (1975), 97.
- Williams, P.R., 'International Environmental Dispute Resolution: The Dispute Between Slovakia and Hungary Concerning Construction of the Gabčíkovo and Nagymaros Dams', 19 *Columbia JEL* (1994), 1.
- Winiarski, B., 'Principes généraux du droit fluvial international', 45 *RdC* (1933-III), 75.
- Winter, G., 'Perspektiven des Umweltrechts', 13 *DVBl.* (1988), 659.
- Wolfrum, R., 'The Principle of Common Heritage of Mankind', 43 *ZaöRV* (1983), 312
- Wolfrum, R., 'Die grenzüberschreitende Luftverschmutzung im Schnittpunkt von nationalem Recht und Völkerrecht', 99 *DVBl.* (1984), 492.
- Wolfrum, R., 'Purposes and Principles of International Environmental Law', 33 *German YbIL* (1990), 308.
- Women's Environmental Network & War on Want, *Women, Environment, Development*, Seminar Report, World Bank, London, 1989.

- Wood, H.W. Jr., 'The United Nations World Charter for Nature: The Developing Nations' Initiative to Establish Protection for the Environment', 12 *Ecology LQ* (1985), 977.
- World Bank, *Recognizing the 'Invisible' Women in Development: The World Bank Experience*, World Bank, Washington D.C., 1979.
- World Bank Information Center (ed.), *Funding Ecological and Social Destruction: The World Bank and International Monetary Fund*, World Bank, Washington D.C., 1989.
- World Bank *Annual Report-Fiscal Year 1989*, World Bank, Washington D.C., 1989
- World Bank/United Nations Environment Programme/United Nations Development Programme, *The Pilot Phase and Beyond*, Working Paper Series No.1, WW/UNEP/UNDP, 1992.
- World Bank, *Enhancing Women's Participation in Economic Development*, A World Bank Policy Paper, World Bank, Washington D.C., 1994.
- World Women's Congress for a Healthy Planet*, Official Report, Women's Environment & Development Organization, 1992.
- Yacker, L., Development of International Environmental Legal Instruments and Related Capacity Building Within the Context of UNCED Agenda 21', in N. Al-Nauimi & R. Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, The Hague/Boston/London, 1995), 1043.
- Yamin, F., *The Climate Change Convention and Joint Implementation: Legal, Institutional and Procedural Issues*, FIELD Working Paper, London, 1993.
- Yamin, F., 'The Use of Joint Implementation to Increase Compliance with the Climate Change Convention: International Legal and Institutional Questions', 2 *RECIEL* (1993), 348; reproduced in J. Cameron *et al.* (eds.), *Improving Compliance with International Environmental Law* (Earthscan, London, 1996), Chap. 11.
- Yamin, F., *Principles of Equity in International Environmental Agreements with Special Reference to the Climate Change Convention*, FIELD Working Paper, London, 1994.
- Yamin, F., *Biodiversity Conservation and Intellectual Property Rights*, Position Paper for the World Wide Fund for Nature, FIELD, London, 1994.
- Yamin, F. & J. Cameron, *Convention for the Conservation and Wise Use of Forests* Draft Text, Center for International Environmental Law, London, 1991.
- Yamin, F. & P. Flint, '1992: the Year in Review - Forests', 3 *YbIEL* (1992), 326.
- Young, M.D., *For Our Children's Children: Some Practical Implications of Inter-Generational Equity and the Precautionary Principle*, Resource Assessment

Commission Occasional Publication No.6, Australian Government Publishing Service, Canberra, 1993.

Yusuf, A.A., 'International Law and Sustainable Development : The Convention on Biological Diversity', 2 *African YbIL* (1994), 109, reproduced in N. Al-Nauimi & R. Meese (eds.), *International Legal Issues Arising Under the Decade of International Law* (Martinus Nijhoff, The Hague/Boston/London, 1995), 1163.

Zealke, D. & J. Cameron, 'Global Warming and Climate Change - an Overview of the International Legal Process', 5 *American University Journal of International Law & Policy* (1990), 249.

Zierock, K.H. (ed.), Technical Note on Best Available Technologies Not Entailing Excessive Costs, Final Report, European Commission, Brussels, 1991.



2. Books & Thesis

i. Books

- Agius, E., *et al.* (eds.), *Future Generations and International Law*, Earthscan, London, 1998.
- Ahmad, Y.J. & G.K. Sammy, *Guidelines to Environmental Impact Assessment in Developing Countries*, Hodder & Stoughton, London, 1985.
- Al-Nauimi, N. & R. Meese (eds.), *International Legal Issues Arising Under the Decade of International Law*, Martinus Nijhoff, The Hague/Boston/London, 1995.
- Anzilotti, D., *Cours de Droit International* Vol. 1, Transl. G. Gidel after the 3rd Italian edn, Recueil Sirey, Paris, 1929.
- Aristote, *Éthique à Nicomaque*, Transl. J. Barthélemy Saint-Hilaire, Rev. A. Gomez-Muller, Livre de Poche, Paris, 1992.
- Arnold, G., *The Third World Handbook*, 2nd edn, Cassell, London/New York, 1994.
- Bachelet, M., *L'ingérence écologique*, Frison-Roche, Paris, 1995.
- Bailey, S.H. & M.J. Gunn, *Smith & Bailey on the Modern English Legal System*, Sweet & Maxwell, London, 1996.
- Baker, P.V. & P.St.J. Langan, *Snell's Principles of Equity*, 28th edn, Sweet & Maxwell, London, 1982.
- Ball, S. & S. Bell, *Environmental Law*, 4th edn, Blackstone, London, 1997.
- Barthélemy, G., *Chipko: Sauver les Forêts de l'Himalaya*, L'Harmattan, Paris, 1982.
- Beck, H., *Die Differenzierung von Rechtspflichten in den Beziehungen zwischen Industrie- und Entwicklungsländern. Eine völkerrechtliche Untersuchung für die Bereiche des internationalen Wirtschafts-, Arbeits- und Umweltrechts*, Peter Lang, Frankfurt am Main/Berlin/Bern/New York/Paris/Vienna, 1994.
- Bedjaoui, M., *Towards a New International Economic Order*, UNESCO, Paris / Holmes & Meier, New York/London, 1978.
- Benedick, R.E., *Ozone Diplomacy*, Harvard University Press, Cambridge/London, 1991.

- Berber, F.J., *Rivers in International Law*, Stevens & Sons, London, 1959.
- Birnie, P. & A. Boyle, *International Law & the Environment*, Clarendon, Oxford, 1992 (2nd edn expected 1999)
- Bogert, G.T., *Trusts*, 6th edn, Practitioner's edn, West Publishing Co., St Paul, Minnesota, 1987.
- Boserup, E., *Woman's Role in Economic Development*, St Martin, 1970; new edn: Earthscan, London, 1989.
- Bothe, M. (ed.), *Trends in Environmental Policy and Law*, IUCN Environmental Policy and Law Paper No.15, Gland, Switzerland, 1980.
- Bouveresse, J., *Droit et politiques du développement et de la coopération*, Presses Universitaires de France, Paris, 1990.
- Bowman, M. & C. Redgwell (eds.), *International Law and the Conservation of Biological Diversity*, Kluwer Law International, London/The Hague/Boston, 1996.
- Boyle, A.E. (ed.), *Environmental Regulation and Economic Growth*, Clarendon, Oxford, 1994.
- Boyle, A.E. & M.R. Anderson, *Human Rights Approaches to Environmental Protection*, Clarendon, Oxford, 1996.
- Braidotti, R. et al. (eds.), *Women, the Environment and Sustainable Development: Towards Theoretical Synthesis*, In straw & Zed Books, London Atlantic Highlands, New Jersey, 1994.
- Brierly, J.L., *The Law of Nations*, 5th edn, Clarendon, Oxford, 1955.
- Briggs, H.W., *The Law of Nations*, 2nd edn, Stevens, London, 1953.
- Brownlie, I., *Principles of Public International Law*, 4th edn, Clarendon, Oxford, 1990.
- Brown Weiss, E., *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity*, United Nations University Press/Transnational Publisher, Tokyo/Dobbs Ferry, New York, 1989.
- Brown Weiss, E. (ed.), *Environmental Change and International Law: New Challenges and Dimensions*, United Nations University Press, Tokyo, 1992.
- Bulajic, M., *Principles of International Development Law*, 2nd edn, Martinus Nijhoff, Dordrecht/Boston/London, 1993.
- Burhenne W.E. & W.A. Irwin, *The World Charter for Nature*, Beiträge Zur Umweltgestaltung Vol. A 90, 2nd revised edn, Erich Schmidt, Berlin, 1986.

- Burhenne-Guilmin, F. *et al.*, *A Guide to the Convention on Biological Diversity* Environmental Policy & Law Paper No. 30, IUCN, Gland, Switzerland, 1994.
- Busuttil, S. *et al.* (eds.), *Our Responsibilities Towards Future Generations, A Programme of UNESCO and the International Environment Institute*, Foundation for International Studies & UNESCO, Malta, 1990.
- Butler, W.E. (ed.), *Control over Compliance with International Law*, Martinus Nijhoff, Dordrecht/Boston/London, 1991.
- Caldwell, L.K., *International Environmental Policy*, 2nd edn, Duke University Press, Durham/London, 1990.
- Cameron, J. (ed.), *Improving Compliance with International Environmental Law*, Earthscan, London, 1996.
- Campiglio, L. *et al.* (eds.), *The Environment after Rio, International Law and Economics*, Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994.
- Canadian Council on International Law (ed.), *Global Forests and International Environmental Law*, Kluwer Law International, London/The Hague/Boston, 1996.
- Cançado Trindade, A.A. (ed.), *Human Rights, Sustainable Development and Environment*, Instituto Interamericano de Desarrollo, San José de Costa Rica, 1995.
- Carley, M. & I. Christie, *Managing Sustainable Development*, Earthscan, London, 1994.
- Carroll, J.E. (ed.), *International Environmental Diplomacy*, Cambridge University Press, Cambridge/New York/New Rochelle/Melbourne/Sydney, 1988.
- Carson, R. *Silent Spring*, Hamish Hamilton, 1963; re-edited by Penguin Books, London, 1991.
- Cassese, A., *International Law in a Divided World*, Clarendon, Oxford, 1986.
- Cassese, A., *Self-Determination of People: A Legal Reappraisal*, Cambridge University Press, Cambridge, 1995.
- Chowdhury, S.R. *et al.* (eds.), *The Right to Development in International Law*, Martinus Nijhoff, Dordrecht/Boston/London, 1992.
- Churchill, R. & D. Freestone (eds.), *International Law and Global Climate Change*, Graham & Trotman-Nijhoff, London/Dordrecht/Boston, 1991.
- Commission on Global Governance, *Our Global Neighbourhood*, Oxford University Press, Oxford, 1995.
- Dailier P. & A. Pellet, revised edition of Nguyen Quoc Dinh, *Droit International Public* 5th edn, LGDJ, Paris, 1994.

- Danilenko, G.M., *Law-Making in the International Community*, Martinus Nijhoff, London/Dordrecht/Boston, 1993.
- Dankelman, I. & J. Davidson, *Women and the Environment in the Third World: Alliance for the Future*, Earthscan & IUCN, London, 1988.
- Davis, S.H., *Land Rights and Indigenous Peoples: The Role of the Inter-American Commission on Human Rights*, Cultural Survival, Cambridge, Massachusetts, 1988.
- Deener, D.R., *The United States Attorneys General and International Law*, Martinus Nijhoff, The Hague, 1957, 254.
- Déjeant-Pons, M., *La Méditerranée en droit international de l'environnement*, Economica, Paris, 1990.
- Dixon, M. & R. McCorquodale, *Cases & Materials on International Law*, 2nd edn, Blackstone, London, 1995.
- Dobson, A., *Green Political Thought*, Routledge, London/New York, 1990.
- Dolman, A.J., *Resources, Regimes and World Order*, Pergamon Policy Studies, Oxford, 1981.
- Dommen E. (ed.), *Fair Principles for Sustainable Development*, Edward Elgar, for UNCTAD, Geneva, 1993.
- Dreyer, D.A., *Le Trust en droit suisse*, Etudes suisses de droit international, vol. 21, Georg, Geneva, 1981.
- Duguit, L., *Traité de Droit Constitutionnel*, Tome I: *La Règle de droit, le Problème de l'état*, 3rd edn, E. de Boccard, Paris, 1927.
- Dupuy, R.J. (ed.), *The Right to Development at the International Level*, Hague Academy of International Law Workshop 1979, Sijthoff & Noordhoff, Alphen aan den Rijn, The Netherlands, 1980.
- Dupuy, R.J. (ed.) *The Future of International Law of the Environment*, Hague Academy of International Law Workshop 1984, Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1985.
- Dworkin, R., *Taking Rights Seriously*, Revised edn, Duckworth, London, 1978.
- Ebbesson, J., *Compatibility of International and National Environmental Law*, Kluwer Law International, London/The Hague/Boston, 1996.
- The Ecologist, *Whose Common Future? Reclaiming the Commons*, Earthscan, London, 1993.
- Ekins, P., *A New World Order, Grassroots Movements for Global Change*, Routledge, London, 1992.

- Elian, G., *The Principle of Sovereignty over Natural Resources*, Sijthoff & Noordhoff, The Netherlands/Maryland, 1979.
- Faculté de Droit de l'Université de Genève & Institut Universitaire des Hautes Etudes Internationales, *Recueil d'études de droit international en hommage à Paul Guggenheim*, Faculté de Droit de l'Université de Genève & IUHEI, Genève, 1968.
- Faucheux, S. *et al.* (eds.), *Models of Sustainable Development, New Horizons in Environmental Economics*, Maln Edward Elgar, Cheltenham, UK/Brookfield, US, 1996.
- Fauchille, P. *Traité de Droit International Public* Vol. I, Pt. 2, Rousseau & cie, Paris, 1925.
- Falloux, F. & L. Tablot, *Crise & Opportunité, environnement et développement en Afrique*, Maisonneuve & Larose & A.C.C.T., Paris, 1992.
- Fenwick, C.G., *International Law*, 3rd edn, Appleton, New York, 1948.
- Flory, M., *Droit international du développement*, Presses Universitaires de France, Paris, 1977.
- Francioni, F. & T. Scovazzi (eds.), *International Responsibility for Environmental Harm*, Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1991.
- Francioni, F. & T. Scovazzi (eds.), *International Law for Antarctica*, Giuffrè, Milano, 1987.
- Francioni, F. & T. Scovazzi (eds.), *International Law for Antarctica*, 2nd edn, Kluwer Law International, The Hague/London/Boston, 1996.
- Freestone, D. & T. Ijlstra (eds.), *The North Sea: Perspectives on Regional Environmental Co-operation*, Special Issue of the International Journal of Estuarine and Coastal Law, Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1990.
- Freestone, D. & E. Hey, *Precautionary Principle in International Law*, Kluwer Law International, London/The Hague/Boston, 1996.
- Friedmann, W.G., *The Changing Structure of International Law*, Stevens & Sons, London, 1964.
- Ghai, D. & J.M. Vivian, *Grassroots Environmental Action, People's Participation in Sustainable Development*, Routledge, London/New York, 1992.
- Gibbs, L. *Love Canal, My Story*, State University of New York, New York, 1982.
- Gilpin, A., *Environmental Impact Assessment, Cutting Edge for the Twenty-First Century*, Cambridge University Press, Cambridge, 1995.
- Ginther, K. *et al.* (eds.), *Sustainable Development and Good Governance*, Martinus Nijhoff, Dordrecht/Boston/London, 1995.

- Gladitz, I., *Lieber Heute Aktiv als Morgen Radioaktiv*, Wagenbach, 1979.
- Gormley, W.P., *Human Rights and the Environment: The Need for International Cooperation*, Sijthoff, Leiden, 1976.
- Groombridge, B. (eds.), *Global Biodiversity, the Status of the Earth's Living Resources*, A Report Compiled by the World Conservation Monitoring Centre, Chapman & Hall, London/Glasgow/New York/Tokyo/Melbourne/Madras, 1992.
- Guggenheim, P., *Traité de droit international public*, Tomes I & II, Librairie de l'Université, Georg & Cie, Geneva, 1953-1954.
- Gupta, J., *The Climate Convention and Developing Countries: From Conflict to Consensus?*, Kluwer Academic, Dordrecht/Boston/London, 1997.
- Haas, P.M., *Saving the Mediterranean, The Politics of International Environmental Cooperation*, Columbia University Press, New York, 1990.
- Handl, G. & R.E. Lutz (eds.), *Transferring Hazardous Technologies and Substances: The International Legal Challenge*, Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1989.
- Hannikainen, L., *Peremptory Norms (Jus Cogens) in International Law*, Lakimiesliiton Kustannus, Helsinki, 1988.
- Hardin, G. & J. Baden, *Managing the Commons*, Freeman & Co, New York, 1977.
- Harris, D.J., *The European Social Charter*, University Press of Virginia, Charlottesville, 1992.
- Harris, D.J., *Cases and Materials on International Law*, 4th edn, Sweet & Maxwell, London, 1991 (New edn 1997)
- Harris, D.J. *et al.*, *Law of the European Convention on Human Rights*, Butterworths, London/Dublin/Edinburgh, 1995.
- Hauser, W., *The Legal Regime for Deep Seabed Mining under the Law of the Sea Convention*, Transl. F. Bunce Dielmann, Kluwer & Metzner, Deventer/Frankfurt am Main, 1983.
- Hayton, D.J., *Underhill & Hayton: Law Relating to Trusts and Trustees*, 14th edn, Butterworths, London, 1987.
- Higgins, R., *Problems and Process: International Law and How to Use It*, Clarendon, Oxford, 1994.
- Hinrichsen, D., *Our Common Seas: Coasts in Crisis*, Earthscan, London 1990.

- Hohmann, H., *Precautionary Legal Duties and Principles of Modern International Environmental Law*, Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1994.
- Hossain, K. (ed.), *Legal Aspects of the New International Economic Order*, Frances Pinter/Nichols Publishing Company, London/New York, 1980.
- Hossain, K. and S.R. Chowdhury (eds.), *Permanent Sovereignty Over Natural Resources, Principles and Practice*, Frances Printer, London, 1984.
- Hurrell, A. & B. Kingsbury (eds.), *The International Politics of the Environment*, Clarendon, Oxford, 1992.
- Hyde, C.C., *International Law as Chiefly Interpreted and Applied by the United States*, 2nd edn, Vol. 1, Little Brown & Company, Boston, 1951.
- I'Anson, R.C., *Lindley & Banks On Partnership*, 17th edn, Sweet & Maxwell, London 1995.
- Independent Commission on International Development Issues (Brandt Commission), *North-South : A Programme for Survival*, Pan Books, London/Sydney, 1980.
- International Centre for Comparative Environmental Law, *Déclaration de Limoges, Rapport de la Réunion mondiale des associations de droit de l'environnement*, 13-15 November 1990, Limoges, Presses Universitaires de France, Paris, 1990.
- IUCN/UNEP/WWF, *World Conservation Strategy*, IUCN/UNEP/WWF, Gland, Switzerland, 1980.
- IUCN/UNEP/WWF, *Caring for the Earth*, IUCN/UNEP/WWF, Gland, Switzerland, 1991.
- IUCN & Environmental Law Center, *Draft International Covenant on Environment and Development*, Environmental Policy and Law Paper No. 31, IUCN, Gland, Switzerland, 1995.
- Jackson, R.G.A. *et al.*, *A Study of the Capacity of the United Nations Development System*, E.70.I.10, United Nations, Geneva, 1969.
- James, D.E., *The Application of Economic Techniques in Environmental Impact Assessment*, Kluwer Academic Publishers, Dordrecht/Boston, 1994.
- Jans, J.H., *European Environmental Law*, Kluwer Law International, London/The Hague/Boston, 1995.
- Jennings, Sir Robert & Sir Arthur Watts, *Oppenheim's International Law*, 9th edn, Longman, London/New York, 1992.

- Jurgielewicz, L.M., *Global Environmental Change and International Law: Prospects for Progress in the Legal Order*, University Press of America, Lanham, Maryland, 1996.
- Kelly, P.K., *Um Hoffnung kämpfen: Gewaltfrei in eine grüne Zukunft*, Lamuv Bornheim-Merten, 1983.
- Kelsen, H., *General Theory of Norms*, Transl. M. Hartney, Clarendon, Oxford, 1991.
- de Klemm, C. & C. Shine, *Biological Diversity Conservation and the Law: Legal Mechanism For Conserving Species and Ecosystems*, Environmental Policy & Law Paper No. 29, IUCN, Gland, Switzerland, 1993.
- Kirkby, J. et al. (eds.), *The Earthscan Reader in Sustainable Development*, Earthscan, London, 1995.
- Kirgis, F.L., *Prior Consultation in International Law: A Study of State Practice*, University Press of Virginia, Charlottesville, 1983.
- Kiss, A.C. (ed.), *The Protection of the Environment and International Law*, Hague Academy of International Law Workshop 1973, Sijthoff, Leiden, 1975
- Kiss, A.C., *Droit International de l'Environnement*, Pédone, Paris, 1983.
- Kiss, A.C. & D. Shelton, *Manual of European Environmental Law*, Grotius, Cambridge, 1993 (2nd. edn, 1997); *Traité de Droit Européen de l'Environnement*, Frison-Roche, Paris, 1995.
- Kiss, A.C. & D. Shelton, *International Environmental Law*, Transnational Publisher, Ardsley-on-Hudson, New York, and Graham & Trotman, London, 1991; *Supplement*, Transnational Publisher, Ardsley-on-Hudson, New York, 1994.
- Koechlin, D., *Das Vorsorgeprinzip im Umweltschutzgesetz unter besonderer Berücksichtigung der Emmissions- und Immissionsgrenzwerte*, Helbing & Lichtenhahn, Basel/Frankfurt, 1989.
- Kornicker, E., *Ius Cogens und Umweltvölkerrecht, Kriterien, Quellen und Rechtsfolgen zwingender Völkerrechtsnormen und deren Anwendung auf das Umweltvölkerrecht*, Helbing & Lichtenhahn, Basel/Frankfurt, 1997.
- Krämer, L., *Focus on European Environmental Law*, Sweet & Maxwell, London, 1992.
- Krämer, L., *E.C. Treaty and Environmental Law*, 2nd edn, Sweet & Maxwell, London, 1995. (3rd edn in 1998)
- Ku, M.-C. (ed.), *A Comprehensive Handbook of the United Nations, a Documentary Presentation in Two Volumes*, Monarch Press, New York, 1979.
- Kuhn, T.S., *The Structure of Scientific Revolutions*, 3rd edn, University of Chicago Press, Chicago/London, 1996.

-
- Kummer, K., *International Management of Hazardous Wastes: The Basel Convention and Related Legal Rules*, Clarendon, Oxford, 1995.
- Lacoste, Y. & J. Sgard, *L'Europe, La France et la Méditerranée: vers de nouveaux Partenariats*, Rapport de l'Atelier 'Méditerranée/Moyen-Orient' du groupe 'Monde-Europe', La Documentation Française, Paris, 1993.
- Lammers, J.G., *Pollution of International Watercourses*, Martinus Nijhoff, Boston/The Hague/Dordrecht/Lancaster, 1984.
- Lang, W. *et al.* (eds.), *Environmental Protection and International Law*, Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1991.
- Lang, W. (ed.), *Sustainable Development and International Law*, Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1995.
- Lauterpacht, E., *Aspects of the Administration of International Justice*, Grotius, Cambridge, 1991.
- Lauterpacht, H. (ed.), *Oppenheim's International Law*, Vol. I, 8th edn, Longmans, Green & Co., London/New York/Toronto, 1955.
- Lauterpacht, H., *International Law Collected Papers*, Vol. I, Cambridge University Press, Cambridge, 1970 (first published at Longmans, Green & Co, 1927).
- Lauterpacht, H., *Private International Law Sources and Analogies of International Law, with Special Reference to International Arbitration*, Archon Books, Hamden, Connecticut, 1970.
- Leanza, U. (ed.), *Il regime giuridico internazionale del mare Mediterraneo*, Giuffrè, Milano, 1987.
- Lefeber, R., *Transboundary Environmental Interference and the Origin of State Liability*, Kluwer law International, The Hague/London/Boston, 1996.
- Lerner, N., *Group Rights and Discrimination in International Law*, Martinus Nijhoff, Dordrecht/Boston/London, 1991.
- Li, Y., *The Transfer of Technology for Deep Sea-Bed Mining, the Law of the sea Convention and Beyond*, Martinus Nijhoff, Dordrecht, 1994.
- Lyster, S., *International Wildlife Law*, Grotius, Cambridge, 1985.
- Maathai, W., *The Green Belt Movement*, ECLI, Nairobi, 1988.
- Macdonald, R.St.J. & D.M. Johnston (eds.), *The Structure and Process of International Law: Essays in Legal Philosophy, Doctrine and Theory*, Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1986.

-
- Maffei, M.C., *La protezione internazionale delle specie animali minacciate*, CEDAM, Padova, 1992.
- Mahmoudi, S., *The law of Deep-Sea Bed Mining*, Almqvist & Wiksell International, Stockholm, 1987.
- Makarczyk, J. (ed.), *Essays in International Law in Honour of Judge Manfred Lachs*, Martinus Nijhoff, The Hague, Boston, Lancaster, 1984.
- Mansbach, R.W. et al., *The Web of World Politics, Nonstate Actors in the Global System*, Prentice-Hall, Englewood Cliffs, New Jersey, 1976.
- Martin, J.E., *Hanbury & Maudsley: Modern Equity*, 13th edn, Stevens & Sons, London, 1989.
- Meadows, D. et al., *The Limits to Growth, A Report of the Club of Rome's Project on the Predicament of Mankind*, Earth Island, London, 1972.
- Meadows, D. et al., *Beyond the Limits, Global Collapse or a Sustainable Future*, Earthscan, London, 1992.
- McConnell, F., *The Biodiversity Convention, a Negotiating History*, Kluwer Law International, London/The Hague/Boston, 1996.
- McWhinney, E. et al. (eds.), *From Coexistence to Cooperation: International Law and Organization in the Post Cold War Era*, Martinus Nijhoff, Dordrecht/Boston/London, 1991.
- Middleton, N. et al., *Tears of the Crocodile, From Rio to Reality in the Developing World*, East African Educational Publisher, Nairobi, 1993.
- Mies, M. & V. Shiva, *Ecofeminism*, Zed Books & Fernwood, London/New Jersey, 1993.
- Mintzer, I.M. & J.A. Leonard (eds.), *Negotiating Climate Change: The Inside Story of the Rio Convention*, Cambridge University Press, Cambridge/New York, 1994.
- Moffat, G., *Trusts Law, Text and Materials*, 2nd edn, Butterworths, London/Dublin/Edinburgh, 1994.
- Morse, G., *Partnership Law*, 3rd edn, Blackstone, London, 1995.
- Morse, B. (Chairman) & T. R. Berger (Deputy Chairman), *Sardar Sarovar, the Report of the Independent Review*, Resource Futures International, Ottawa, 1992.
- Mughraby, M., *Permanent Sovereignty over Oil Resources*, The Middle East Research & Publishing Center, Beyrouth, 1966.
- Munro R.D. & J.G. Lammers, *Environmental Protection and Sustainable Development: Legal Principles and Recommendations*, Final Rapport of World Commission on

- Environment and Development, Experts Group on Environmental Law, Graham & Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1986.
- Nanda, V.P., *International Environmental Policy*, Transnational Publishers, New York, 1995.
- Nollkaemper, A., *The Legal Regime for Transboundary Water Pollution: Between Discretion and Constraint*, Martinus Nijhoff/Graham & Trotman, Dordrecht/Boston/London, 1993.
- Nørgaard, C.A., *The Position of the Individual in International Law*, Munksgaard, Copenhagen, 1962.
- Oakley, A.J., *Parker & Mellows: The Modern Law of Trusts*, 6th edn, Sweet & Maxwell, London, 1994.
- O'Connell, D.P., *International Law* Vol. 1, 2nd edn, Stevens & Sons, London, 1970.
- Ofosu-Amaah & Philleo, *Women and the Environment: An Analytical Review of Success Stories*, UNEP-WorldWIDE Network, Nairobi/Washington D.C., 1992.
- Oppenheim, L.F.L., *International Law, a Treatise*, 2nd edn, Vol. I, Longmans Green, New York/London, 1912.
- O'Riordan, T. & J. Cameron (eds.), *Interpreting the Precautionary Principle*, Cameron May, London, 1994.
- Overholt, C. *et al.* (eds.), *Gender Roles in Development Projects: A Casebook*, Kumarian, West Hartford, 1985.
- Patton-Hulce, V.R., *Environment and the Law: a Dictionary*, ABC-CLIO, Santa Barbara, 1995.
- Pearson L.B. & Sir E. Boyle *et al.*, *Partners in Development*, Report of the Commission on International Development, Pall Mall, London, 1969.
- Pettit, P.H., *Equity and the Law of Trusts*, 8th edn, Butterworths, London, 1997.
- Pearce, D.W. *et al.*, *Sustainable Development: Economics and Environment in the Third World*, E. Elgar, Aldershot, 1990.
- Pearce, D.W. & J.J. Warford, *World Without End, Economics, Environment and Sustainable Development*, The World Bank, Washington D.C., 1993.
- Politis, N., *The New Aspects of International Law, A Series of Lectures delivered at Columbia University in July 1926*, Carnegie Endowment for International Peace, Washington, 1928.
- Porter, G. & J. Welsh Brown, *Global Environmental Politics*, Westview, Boulder/San Francisco/Oxford, 1991.

- Prime, T. & T. Scanlan, *The Law of Partnership*, Butterworths, London/Dublin/Edinburgh, 1995.
- Rajan, M.S., *Sovereignty over Natural Resources*, Humanities Press, Atlantic Highlands, 1978.
- Ravenel, B., *Méditerranée: l'impossible mur*, L'Harmattan, Paris, 1995.
- Rawls, J., *A Theory of Justice*, Oxford University Press, Oxford, 1973.
- Recueil d'études de droit international en hommage à Paul Guggenheim*, Faculté de Droit de l'Université de Genève & IUHEI, Geneva, 1968.
- Redclift, M., *Sustainable Development: Exploring the Contradictions*, Routledge, London/New York, 1987.
- Redslob, R., *Traité de droit des gens*, Sirey, Paris, 1950.
- Rehbinder, E., *Das Vorsorgeprinzip im internationalen Vergleich*, Werner, Düsseldorf, 1991.
- Rodda, A. (ed.), *Women and the Environment*, Zed Books, London, 1991.
- Roe, D., B. Dalal-Clayton & R. Hughes, *A Directory of Impact Assessment Guidelines*, IIED/WRI/IUCN for OECD-DAC, London, 1995.
- Röling, B.V.A., *International Law in an Expanded World*, Djambatan, Amsterdam, 1960.
- Rosenberg, D., *Le principe de la souveraineté des États sur leurs ressources naturelles*, LGDJ, Paris, 1983.
- Ross, A., *A Textbook of International Law, General Part*, Longmans, Green & Co., London, 1947.
- Rousseau, C., *Droit international public* Tome II, Sirey, Paris, 1974.
- Saladin, P. & C.A. Zenger, *Rechte Künftiger Generationen*, Helbing & Lichtenhahn, Basel/Frankfurt-am-Main, 1988.
- Sand, P.H., *Lessons Learned in Global Environmental Governance*, World Resource Institute, Washington D.C., 1990; reproduced in Tuchman Mathews, J. (ed.), *Preserving the Global Environment, The Challenge of Shared Leadership* (Norton & Co., New York/London, 1991) Chap. 8.
- Sands P. (ed.), *Chernobyl: Law and Communication*, Grotius, Cambridge, 1988.
- Sands, P. (ed.), *Greening International Law*, Earthscan, London, 1993.

-
- Sands, P. *Principles of International Environmental Law*, Volume I, Manchester University Press, Manchester/New York, 1995.
- Saunders, J.O. (ed.), *The Legal Challenge of Sustainable Development, Essays from the Fourth Institute Conference on Natural Resources Law*, Canadian Institute of Resource Law, Calgary, 1990.
- Sauvant, K.P., *The Group of 77: Evolution, Structure, Organization*, Oceana, Dobbs Ferry, New York, 1981.
- Scelle, G., *Précis du Droit des Gens*, Tome I, *Introduction, Le Milieu Intersocial*, Sirey, Paris, 1932.
- Scelle, G., *Manuel élémentaire de droit international public*, Domat-Montchrétien, Paris, 1943.
- Schachter, O., *Sharing the World's Resources*, Columbia University Press, New York, 1977.
- Schmidlin, B. & C.A. Cannata, *Droit Privé Romain*, 2 Volumes Collection Juridique Romande, Payot, Lausanne, 1984.
- Schmidt, M. G., *Common Heritage or Common Burden?*, Clarendon, Oxford, 1989.
- Schneider, J., *World Public Order of the Environment, Towards an International Ecological Law and Organization*, Stevens & Sons, London, 1975.
- Schwarzenberger, G. & E.D. Brown, *A Manual of International Law*, 5th edn, Stevens & Sons, London, 1976.
- Seidl-Hohenveldern, I., *International Economic Law*, 2nd edn, Martinus Nijhoff, Dordrecht/Boston/London, 1992.
- Shiva, V., *Staying Alive: Women, Ecology and Development*, Zed Books, London, 1989).
- Smith, H.A., *The Economic Uses of International Rivers*, P.S. King & Son, London, 1931.
- Simonis, U.E. (ed.), *Präventive Umweltpolitik*, Campus, Frankfurt/Main, 1988.
- Simma, B. (ed.), *The Charter of the United Nations, a Commentary*, Oxford University Press, Oxford/New York, 1995.
- Sikora, R.I. & B. Barry (eds.), *Obligations to Future Generations*, Temple University Press, Philadelphia, 1978.
- Snyder F. & P. Slinn, *International Law of Development: Comparative Perspectives*, Professional Books, Abingdon, Oxon, 1987.

- Société Française pour le Droit International, *Pays en voie de développement et transformation du droit international* Colloque d'Aix-en-Provence, Pédone, Paris, 1974.
- Somsen, H. (ed.), *Protecting the European Environment: Enforcing EC Environmental Law*, Blackstone, London, 1996.
- Soroos, M.S., *Beyond Sovereignty: The Challenge of Global Policy*, University of South Carolina Press, Columbia, 1986.
- South Commission, *The Challenge to the South*, Oxford University Press, Oxford, 1990.
- Starke, L., *Des raisons d'espérer, préparer notre avenir commun*, Frison-Roche, Paris, 1992.
- Stokke, O. (ed.), *Sustainable Development*, Frank Cass, London, 1991.
- Susskind, L.E., *Environmental Diplomacy, Negotiating more Effective Global Agreements*, Oxford University Press, New York/Oxford, 1994.
- Suter, K., *Antarctica: Private Poverty or Public Heritage?*, Zed Books, London, 1991.
- Tanquerel, T., *Les voies de droit des organisations écologistes en Suisse et aux Etats-Unis*, Helbing & Lichtenhahn, Basel/Frankfurt, 1996.
- Teclaff, L.A. & A.E. Utton, *International Groundwater Law*, Oceana, London, 1981.
- Timberlake, L., *Africa in Crisis, The Causes, the Cures of Environmental Bankruptcy*, new edn, East African Educational Publishers, Nairobi, 1985.
- Tinbergen *et al.*, *Report on Planning and Development*, United Nations, New York, 1970.
- Tolba, M.K., *Saving Our Planet, Challenges and Hopes*, Chapman & Hall, London/New York/Melbourne/Tokyo/Madras, 1992.
- Tunkin, G., *Le droit international public: problèmes théoriques*, Pédone, Paris, 1965.
- United Nations, *The Global Partnership for Environment and Development*, UN, New York, 1993.
- UNEP (ed.), *UNEP's New Way Forward : Environmental Law and Sustainable*, UNEP, Nairobi, 1995.
- VanderZwaag, D.L., *Canada and Marine Environmental Protection, Charting a Legal Course towards Sustainable Development*, Kluwer Law International, London/The Hague/Boston, 1995.
- Van Dijk, P. & G.J.H. Van Hoof, *Theory and Practice of the European Convention on Human Rights* 2nd edn, Kluwer Law & Taxation, Deventer, Boston, 1990 (3rd edn 1998).

- van Hoof, G.J.H., *Rethinking the Sources of International Law*, Kluwer Law & Taxation Deventer/Netherlands, Antwerp/Boston/Frankfurt/London, 1983.
- Verloren van Themaat, P., *The Changing Structure of International Economic Law*, Martinus Nijhoff, The Hague/Boston/London, 1981.
- Verdoss, A., *Völkerrecht*, 4th edn, Springer, Vienna, 1959.
- Verwey, W.D., *Economic Development, Peace and International Law*, VanGorcum, Assen, 1972.
- Volger, J., *The Global Commons, A Regime Analysis*, John Wiley & Sons, Chichester/New York/Brisbane/Toronto/Singapore, 1995.
- Vogler, J. & M.F. Imber (eds.), *The Environment & International Relations*, Routledge, London/New York, 1996.
- de Waart, P. *et al.* (eds.), *International Law and Development*, Martinus Nijhoff, Dordrecht/Boston/London, 1988.
- Ward, B. & R. Dubos, *Only One Earth*, W. W. Norton & Company, New York/London, 1983.
- Weatherill, S. & P. Beaumont, *EC Law*, 2nd edn, Penguin, London/New York/Victoria/Toronto/Auckland, 1995.
- Weber, T., *Hugging the Trees, The Story of the Chipko Movement*, Viking, Melbourne, 1987.
- Wilson, W.A. (ed.), *Trusts and Trust-Like Devices*, United Kingdom Comparative Law Series, Vol.5, The Chameleon Press, London, 1981.
- The World Bank & The European Investment Bank, *The Environmental Program for the Mediterranean*, WB/EIB, Washington D.C., 1990.
- World Commission on Environment and Development, *Our Common Future*, Oxford University Press, Oxford/New York, 1987.
- Yarochinskaya, A., *Tchernobyl Vérité Interdite*, Transl. M. Kahn, Artel-Edn de L'Aube, Louvain-la-Neuve, 1993.
- Young, O.R., *International Cooperation: Building Regimes for Natural Resources and the Environment*, Cornell University Press, Ithaca/London, 1989.
- Zacklin, R. & L. Caflisch (eds.), *The Legal Regime of International Rivers and Lakes*, Nijhoff, The Hague/Boston/Lancaster, 1981.
- Zürcher, A., *Die vorsorgliche Emmissionsbegrenzung nach dem Umweltschutzgesetz*, Schultess, Zürich, 1996.

ii. Ph.D. Dissertations

Baslar, K., *The Concept of the Common Heritage of Mankind in International Law*, Ph.D. Thesis, Nottingham University, 1994; to be published by Kluwer Law International, London/The Hague/Boston, 1998.

Gillespie, A., *International Environmental Ethics: Value and Methods in International Environmental Law and Policy*, Ph.D. Thesis, Nottingham University, 1994; first part published under the title *International Environmental Law, Policy, and Ethics*, Oxford University Press, Oxford, 1998.

Loser, P., *Kausalitätsprobleme bei der Haftung für Umweltschäden*, Ph.D. thesis, Hochschule St.Gallen, 1994; published by Paul Haupt, Bern/Stuttgart/Vienna, 1994.

Pannatier, S., *L'antarctique et la protection internationale de l'environnement*, Thèse, Université de Neuchâtel, Huber Duck, Entlebuch, 1994; published by Schulthess Polygraphischer, Zürich, 1994.

Rojas-Albonico, N., *Le droit au développement comme un droit de l'homme*, Ph.D. dissertation, Zürich University, 1994; published by Peter Lang, Bern/Frankfurt am Main/Nancy/New York, 1984.



3. Documentary Sources

i. Main Secondary Sources of International Environmental Law Instruments

Birnie, P. & A. Boyle (eds.), *Basic Documents on International Law and the Environment*, Clarendon, Oxford, 1995.

Brownlie, I. (ed.), *Basic Documents on Human Rights*, 3rd edn, Clarendon Press, Oxford, 1992.

Burhenne, W.E. (ed.), *International Environmental Law: Multilateral Treaties* (looseleaf), Verlag Schmidt, Berlin, 1974-pres.

Burhenne, W.E. & M. Jahnke (eds.), *International Environmental Soft Law, Collection of Relevant Documents* (looseleaf), Kluwer Law International, The Hague/Boston/London, 1993-pres.

Burhenne, W.E. & N.A. Robinson (eds.), *International Protection of the Environment: Conservation in Sustainable Development* (booklets), Oceana, Dobbs Ferry, New York, 1995-pres.

Freestone, D. & T. Ijlstra (eds.), *The North Sea: Basic Legal Documents on Regional Environmental Co-operation*, Graham & Trotman/Martinus Nijhoff, Dordrecht/Boston/London, 1991.

Hohmann, H. (ed.), *Basic Documents of International Environmental Law*, 3 Volumes, Graham & Trotman, London/Dordrecht/Boston, 1992.

Loudiyi, D. & A. Meares, *Women In Conservation, Tools for Analysis and a Framework for Action*, IUCN, Gland, Switzerland, 1993.

Sands, P. *et al.* (eds.), *Principles of International Environmental Law: Documents in International Environmental Law*, Volumes IIA & II B, Manchester University Press, Manchester/New York, 1994.

Sands, P. *et al.* (eds.), *Principles of International Environmental Law: Documents in European Community Environmental Law*, Volume III, Manchester University Press, Manchester/New York, 1995.

Robinson, N.A.(ed.), *Agenda 21 & the UNCED Proceedings*, 6 Volumes, Oceana Publications, New York/London/Rome, 1992/1993.

Rüster, B. & B. Simma (eds.), *International Protection of the Environment, Treaties and Related Documents*, 30 Volumes plus Index, Oceana, Dobbs Ferry, New York, 1975-1983.

Rüster, B. & B. Simma (eds.), *International Protection of the Environment, Treaties and Related Documents*, Second Series, Oceana, Dobbs Ferry, New York, 1994-pres.

The United Nations and the Advancement of Women, 1954-1995, The United Nations Blue Books Series, Vol. VI, Department of Public Information, United Nations, New York, 1995.

ii. Analytical Tools

United Nations Office at Vienna, Center for Social Development and Humanitarian Affairs, *1989 World Survey on the Role of Women in Development*, United Nations, New York, 1989.

United Nations, Department for International Economic and Social Affairs, Statistical Office, *Compendium of Statistics and Indicators on the Situation of Women 1986*, Series K No 5, U, United Nations, New York, 1989,

United Nations Office at Vienna, Center for Social Development and Humanitarian Affairs, *The World's Women 1970-1990, Trends and Statistics*, Series K No 8, United Nations, New York, 1991.

Nelson, B.J. & N. Chowdhury (eds.), *Women and Politics Worldwide*, Yale University Press, New Haven/London, 1994.

United Nations, Department for Economic and Social Information and Policy Analysis, Statistical Division, *The World's Women 1995, Trends and Statistics*, Series K No 12, United Nations, New York, 1995.

iii. Bibliographies

African Training & Research Center for Women, *African Women in Development: Annotated Bibliography*, Bibliographic Series No. 11/1991, E/ECA/ATRWC/3.3(II)(c)/91, United Nations Economic Commission for Africa, 1991.

Marien, M., 'Environmental Problems and Sustainable Futures, Major Literature from WCED to UNCED', 24 *Future* (1992).

Saxena, S.K., 'Selected Bibliography on the New International Economic Order, 1960-1978', 20 *Indian JIL* (1980), 125.

Townsend, J., *Women in Developing Countries: a Selected Bibliography for Development Organisations*, Development Bibliographies, University of Sussex, Institute of Development Studies, Brighton, 1988.

United Nations Economic and Social Commission for Asia and the Pacific, *Annotated Bibliography on Women in Development in Asia and the Pacific*, OP-UN/ST/ESCAP/559, 1986.

White, K., *Women in Development: An Annotated Bibliography for the World Bank*, Overseas Development Council, Washington, 1976.

