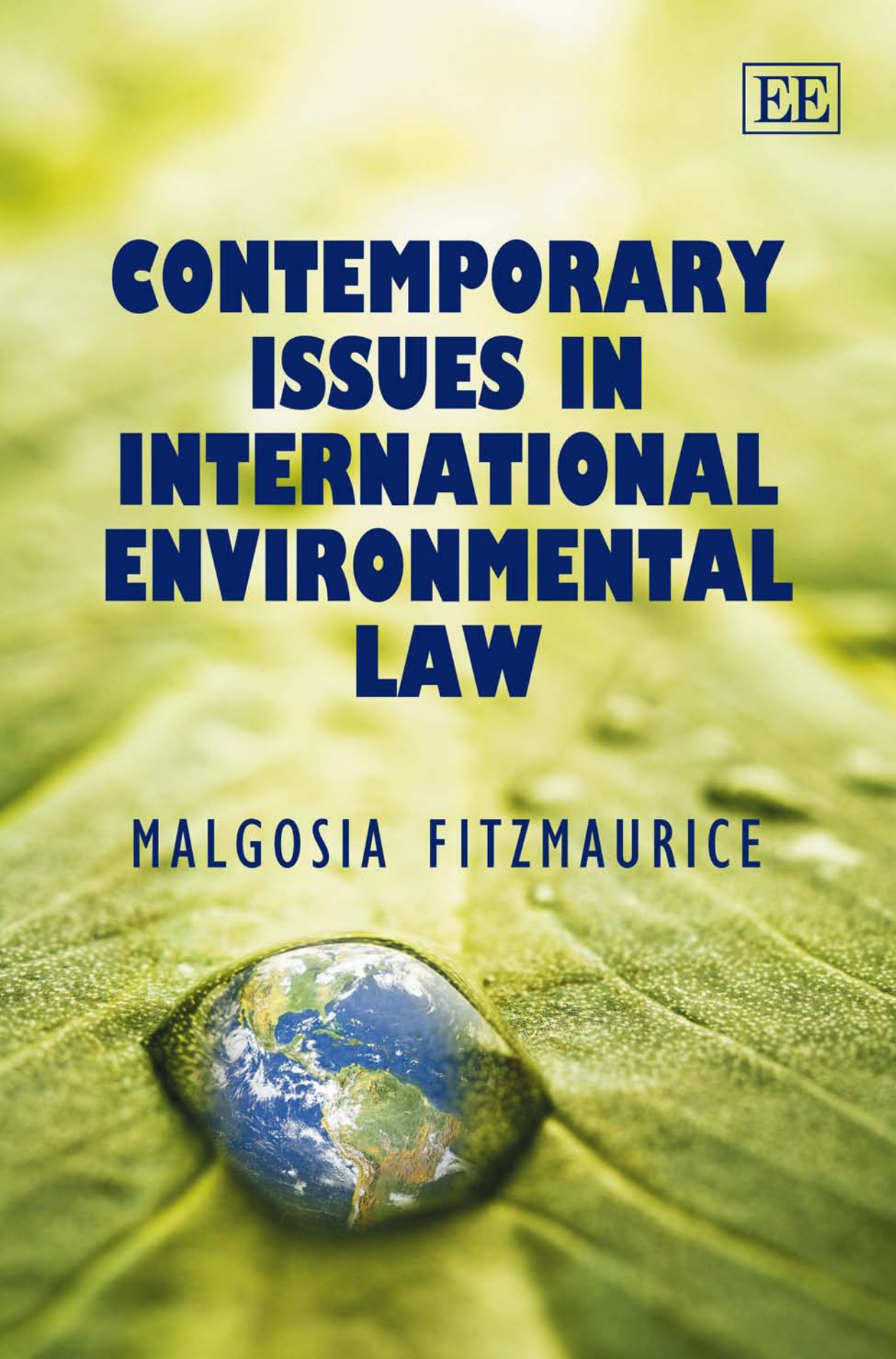
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CONTEMPORARY ISSUES IN INTERNATIONAL ENVIRONMENTAL LAW
MALGOSIA FITZMAURICE

Contemporary Issues in International Environmental Law

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Malgosia Fitzmaurice

Professor of Public International Law, Queen Mary University of London, UK

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Contents

Abbreviations

AJIL	*American Journal of International Law*
ALARP	As Low as Reasonably Practicable
Art.	Article
BA	British Airways
BASREC	Baltic Sea Region Energy Co-operation
BATBEP	Best Available Technology/Best Environmental Practice
BLA21F	Baltic Local Agenda 21 Forum
BPO	Baltic Ports Organization
BSPC	Baltic Sea Parliamentary Conference
BSSSC	Baltic Sea States Sub-regional Cooperation
CAS	Condition Assessment Scheme
CBA	Cost-Benefit Analysis
CBDR	Common but Differentiated Responsibilities
CBSS	Council of the Baltic Sea States
CCB	Coalition Clean Baltic
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CO_2	Carbon Dioxide
Colo.J.Int'l.Entvt'lL&Pol'y	*Colorado Journal of International Environmental Law and Policy*
CSD	UN Commission on Sustainable Development
CZM	Baltic Sea Region Coastal Integrated Management Zone
DDT	Dichloro-Diphenyl-Trichloroethane
Den. J. Int'l L. & Pol'y	*Denver Journal of International Law and Policy*
DENR	Department of Environment and Natural Resources
Duke J. Comp. & Int'l L.	*Duke Journal of Comparative and International Law*
DWT	Dead Weight Tonns
EBRD	European Bank for Reconstruction and Development

EC	European Community
ECHR	European Convention on Human Rights
ECOSOC	Economic and Social Council
ECtHR	European Court of Human Rights
EEOICPA	Energy Employees Occupational Illness Compensation Programme
EFP	Experimental Fishing Programme
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EJIL	*European Journal of International Law*
ENGOs	Environmental non-Governmental Organizations
Envtl. L. Rev.	*Environmental Law Review*
Envtl. Liability	Environmental Liability
EU	European Union
EHRR	European Human Rights Reports
FAO	Food and Agriculture Organization
FFMP	Fiscal and Financial Management Programme
GA	General Assembly
GAOR	General Assembly Official Records
GATT	General Agreement on Tariffs and Trade
GEF	Global Environmental Facility
Geo. Int'l Envtl. L. Rev.	*Georgetown International Environmental Law Review*
GMOs	Genetically Modified Organisms
HACAN	Heathrow Association for the Control of Aircraft Noise
HELCOM	Helsinki Commission
HGO	Heavy Grade Oil
HRA	Human Rights Act
HRC	Human Rights Commission
HRLJ	*Human Rights Law Journal*
HQ	Headquarters
IAEA	International Atomic Energy Agency
IBSFC	International Baltic Sea Fishery Commission
ICJ	International Court of Justice
ICLR	*International Community Law Review*
ICLQ	*International and Comparative Law Quarterly*
IFIs	International Financial Institutions

IJGLS	*Indiana Journal of Global Legal Studies*
IJMGR	*International Journal on Minority and Group Rights*
ILA	International Law Association
ILC	International Law Commission
ILM	International Legal Materials
IMO	International Maritime Organization
IOPP	International Oil Pollution Prevention
IOSC	International Oil Spill Conference
ISM Code	International Safety Management Code
ITLOS	International Tribunal for the Law of the Sea
JEL	*Journal of Environmental Law*
JIBL	*Journal of International Biotechnology Law*
LDAs	Local Distribution Authorities
LJIL	*Leiden Journal of International law*
LOS	Law of the Sea
LOSC	Law of the Sea Convention
MARPOL 73/38	1973/78 Convention on the Prevention of Pollution from Ships
Max Planck Y.B. UN. L	*Max Planck Yearbook of United Nations Law*
MEPC	Marine Environment Protection Committee
MIITF	The Marshall Islands Intergenerational Trust Fund
MONAS	Monitoring and Assessment Group
MOX	Mixed Oxide
N.Y.U. J. Int'l Law & Pol.	*New York University Journal of International Law and Policy*
NCT	Nuclear Claims Tribunal
NCTA	Nuclear Claims Tribunal Act
ND	Northern Dimension
NEFCO	Nordic Environment Finance Corporation
NGOs	Non-governmental Organizations
NIB	Nordic Investment Bank
NILR	*Netherlands International Law Review*
ONA Project	Oceans in the Nuclear Age Project
OPA	Oil Pollution Act
OPRC Convention	International Convention on Oil Pollution Preparedness, Response and Cooperation
OSPAR Convention	Convention for the Protection of the Marine Environment of the North-East Atlantic
OJLS	*Oxford Journal of Legal Studies*

P&I	Protection and Indemnity
PCB	Polychlorinated Biphenyls
PIC	Prior Informed Consent
PoI	Plan of Implementation
POPs	Persistent Organic Pollutants
PPP	Polluter-Pays Principle
RECIEL	*Review of European Community and International Environmental Law*
RMI	Republic of the Marshall Islands
Rutgers L. Rev.	*Rutgers Law Review*
SC	Security Council
SCOPIC	Special Compensation Protection and Indemnity Clause
Sess.	Session
SOG	Senior Officials Group
SPS Agreement	Sanitary & Phytosanitary Agreement
SSS	Short Sea Shipping
Stanford J. Int'l L.	*Stanford Journal of International Law*
STCW	Standards of Training, Certification and Watchkeeping
TFSA	Task Force Sustainable Agriculture
TLAs	Timber Licensing Agreements
UBC	Union of Baltic Cities
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNTS	United Nations Treaty Series
VASAB	Vision and Strategies around the Baltic Sea
VISA	Virtual Institute for Sustainable Agriculture
WCED	World Commission on Environment and Development
WFD	Water Framework Directive
WG	Working Group
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
WWF	World Wide Fund for Nature
YBIEL	*Yearbook of International Environmental Law*
ZaöRV	*Zeitschrift für ausländisches und öffentliches Recht und Völkerrecht*

Treaties, international and national documents

CONSTITUTIONS

Cases

Introduction

The present book deals with current issues of international environmental law. The aim of this book is to present the problems which, although well-known and widely written about, have not been entirely solved or remain controversial or, regrettably, have become useful clichés. The present book is not meant as a textbook or a comprehensive study of international environmental law; it is a collection of essays which analyse certain concepts, such as the precautionary principle and sustainable development, the legal character, normative content and practical application of which are questionable.

The study is firmly rooted in international law. It will assess certain concepts and principles of international environmental law from the point of view of the general concepts of international law. Therefore the issues of international environmental law are viewed in this study with international law as the background and in close link with all its underlying principles. The book relies on the work of the International Law Commission and takes into account the relevant jurisprudence of international courts and tribunals. Such an approach enables full understanding of the problems involved. The book, when necessary, also presents the views of philosophers. This is so, for instance, in relation to intergenerational equity, where the philosophical background of the theory of John Rawls is necessary for us to understand the whole concept of intergenerational equity.

Several areas of international environmental law will be examined, such as the legal content of the precautionary principle and its applicability in practice; the human right to a clean environment, whether it already exists and is it in fact really a necessary right in order to address and redress environmental problems of an individual (this question will be analysed in particular within the context of the jurisprudence of the European Court of Human Rights); the concept of intergenerational equity or intergenerational rights, which is closely connected to the right to a clean environment will be looked at from the point of view of its usefulness in practice; the concept of sustainable development will be examined from the point of view of its legal content (if any). The practice of States will be scrutinized, for example, in relation to the national application of the precautionary principle, and the author will rely on documents in languages other than English, such as Polish or Russian.

In conclusion it may be said that the present book will deal with somewhat controversial and unclear issues of international environmental law. The author does not purport to give the answers to problems dealt with, but rather to identify the issues and their inconsistencies.

The author would like to express her gratitude to Mr Panos Merkouris for the editing of the book and very useful comments on its first draft.

1. Precautionary principle

I. INTRODUCTION

The precautionary principle is one of the founding principles of international environmental law. It is an undisputed and widely-known phenomenon the legal content and status of which, however, as is the case with many other principles of international environmental law, are very unclear. As was aptly stated:

> Despite the success of the principles of the polluter pays, prevention, and precaution in international and EC law as well as national environmental laws, neither doctrine nor case law has succeeded in clearing up the mystery of their legal status. How should we class these three principles? Do they display the characteristics that typify normative principles? Are we dealing with complete rules? Are they sufficiently precise to allow legal effects to be deduced? Do they call for the adoption of more precise rules?[1]

This chapter does not purport to provide a comprehensive survey of problems concerning the precautionary principle, which has been the subject of numerous previous publications,[2] but has a more limited purpose,

[1] N. de Sadeleer, *Environmental Principles, From Political Slogans to Legal Rules* (2002) at 395.

[2] To mention a few: A. Trouwborst, *Evolution and Status of the Precautionary Principle in International Law* (2002) (hereinafter Trouwborst I); A. Trouwborst, *Precautionary Rights and Duties of States* (2006), (hereinafter Trouwborst II); D. Bodansky, 'New Developments in International Environmental Law: Remarks by Daniel Bodansky', 85 *Proceedings of the Annual Meeting* (1991) 413, at 413–7 (hereinafter Bodansky I); D. Bodansky, 'Scientific Uncertainty and the Precautionary Principle', 33 *Environment* (1991) 4 (hereinafter Bodansky II); D. Bodansky, 'Customary (and Not So Customary) International Environmental Law', 3 *IJGLS* (1995) 105 (hereinafter Bodansky III); J. Cameron, 'The Status of the Precautionary Principle in International Law', in T. O'Riordan and J. Cameron (eds), *Interpreting the Precautionary Principle* (1994) 263, at 263–89; J. Cameron and J. Abouchar, 'The Status of the Precautionary Principle in International Law', in D. Freestone and E. Hey (eds), *The Precautionary Principle and International Law* (1996) 29, at 29–52 (hereinafter Cameron/Abouchar I); J. Cameron and J. Abouchar, 'The Precautionary Principle: A Fundamental Principle of Law and Policy for Protection of Global Environment', 14 *Boston College of International and Comparative Law* (1991) 1, at 1–27 (hereinafter Cameron/Abouchar II); J. Cameron and J. Abouchar, 'The Precautionary Principle', in G. Sampson and W.B. Chambers (eds), *Trade, Environment and the Millennium* 239 (2nd edn, 2002), at 239–69 (hereinafter Cameron/Abouchar III); D. Freestone, 'International Fisheries Law Since Rio: The

and will focus on the examination of its practical implementation in the marine area. The chapter provides, first, a section on the general issues of the precautionary principle, and then the specific section dealing with the particular areas of interest.

The general application of this principle will be examined in the practice of the International Maritime Organization (the 'IMO'), based on the 1973/78 Convention on the Prevention of Pollution from Ships ('MARPOL 73/78') and the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (the 'London Convention', including the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter) taking into account the national practice of selected States in the implementation of the precautionary principle resulting from these Conventions. Further, regional practice will be analysed, taking into consideration the less well-known areas, such as the Baltic Sea Area which is covered by the 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area (hereinafter the 'Helsinki Convention').[3] This region is very interesting,

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Continued Rise of Precautionary Principle', in A. Boyle and D. Freestone (eds), *International Law and Sustainable Development: Past Achievements and Future Challenges* (1999) 135, at 135–64 (hereinafter Freestone I); D. Freestone, 'Caution or Precaution: "A Rose by Any Other Name . . ."', 10 *YBIEL* (1999) 25, at 25–33 (hereinafter Freestone II); M. Böckenförde, 'The Operationalization of the Precautionary Approach in International Environmental Law Treaties: Enhancement of Façade Ten Years after Rio', 63 *ZaöRV* (2003) 313, at 313–33 H. Hohmann, *Precautionary Legal Duties and Principles of Modern International Environmental Law*, (1994); D. Freestone, 'Precautionary Principle', in R. Churchill and D. Freestone (eds), *International Law and Global Climate Change* (1991) 23, at 23–32 (hereinafter Freestone III); A. Nollkaemper, 'The Precautionary Principle in International Environmental Law', 22 *Marine Pollution Bulletin* (1991) 1070, at 1070–1110; E. Hey, 'The Precautionary Approach, Implications of the Revision of the Oslo and Paris Conventions', 15 *Marine Policy* (1991–4) 244, at 244–53 (hereinafter Hey I); E. Hey, 'The Precautionary Concept in Environmental Policy and Law', 1 *Geo. Int'l Envtl.L. Rev*. (1992) 257, at 257–458 (hereinafter Hey II); O. McIntyre and T. Mosedale, 'The Precautionary Principle as a Norm of Customary International Law', 9 *JEL* (1997) 221, at 221–41; R. Andorno, 'The Precautionary Principle: A New Legal Standard for Technological Age', 1 *JIBL* (2004) 11, at 11–19 ; J.M. van Dyke, 'The Evolution and International Acceptance of the Precautionary Principle', in D.D. Caron and H.N. Scheiber (eds), *Bringing New Law to Ocean Waters* (2004) 357, at 357–79 (2004) (hereinafter van Dyke I); J.M. van Dyke, 'Giving Teeth to the Environmental Obligations in the Law of the Sea Convention', in D. Rothwell and A.G. Oude Elferink (eds), *Oceans Management in the 21st Century: Institutional Framework and Responses* (2004) 167, at 167–86 (hereinafter van Dyke II); S. Marr, *The Precautionary Principle in the Law of the Sea: Modern Decision Making in International Law* (2003); E. Fisher, 'Is the Precautionary Principle Justiciable?', 13 *JEL* (2001) 315, at 315–34; N.J. Meyers and C. Raffensperger (eds), *Precautionary Tools for Reshaping Environmental Policy* (2006); J. Wiener, 'Precaution', in D. Bodansky et al. (eds), *The Oxford Handbook of International Environmental Law* (2007) 597, at 597–613.

[3] The 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area, 32 ILM (1993) 1068. The Convention entered into force on 17 January 2000. This Convention replaced the 1974 Convention. The text is available online at: http://swww.helcom.fi/helcom/convention.html (last visited on 15 June 2008).

as it constitutes a micro-world in which the coastal States have different degrees of economic development, and all of which, with the exception of Russia, are members of the European Union, which itself is a party to the Convention (see below).

It will be shown that, although all the instruments examined include the precautionary principle, its implementation by States or by the treaty organs is not precautionary but for purposes of prevention, based on scientific knowledge, and consequently that there are very few examples of true implementation of the precautionary principle, despite widespread conviction as to its ubiquitous application. The practice of States and international bodies, which is the subject of this chapter, presents further evidence of its ill-defined and unclear character.

II. GENERAL

A. General Introduction to the Precautionary Principle

There may be several ways in which the protection of the environment can be approached.[4] These are: the curative model; the preventive model; and the anticipatory model. In general terms it may be said that the first of these models is based on a conceptual premise that natural resources are exhaustible and nature has to be assisted to cure itself. The costs of such assistance are to be provided by the polluter. However, such a policy is feasible only if implemented together with the preventive policy, in order to minimize reparation to what could be compensated. In such a model, the risks to be dealt with are still foreseeable.[5] The preventive model is based on the premise of limiting damage, while allowing a certain degree of nuisance. This model requires prudence in approaching the exploitation of natural resources, and it is aimed at greatly reducing damage, which may only occur accidentally. It is based on the assimilative capacity of the environment, which cannot be exceeded, otherwise loss will happen. This model is fully based on available scientific knowledge.[6] The anticipatory model is the most environmentally oriented model, which, as is surmized, emerged because of disappointment with scientific predictability 'which comes up against staggering limits in the field of environment', whilst in the field of environmental protection 'the

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[4] de Sadeleer, *supra* note 1, at 15–19.

[5] *Ibid.*, at 15.

[6] *Ibid.*, at 17. He wrote as follows: 'The preventive model has a blind faith in science; for that reason it cannot prevent environmental degradation'.

only certainty is uncertainty'.[7] The precautionary principle falls squarely into the third model.

In the main, the discussion of legal issues concerning the precautionary principle centres on its status in international customary law. However, as Professor Freestone pointed out:

> discussions about whether the precautionary principle is a binding principle of international customary law have a distinctly 1990s feel about them. It would be depressing to think that the debate has not moved further than a discussion about whether the precautionary principle is still too vague to be regarded as a legal principle.[8]

However, as will be shown, the practice of international courts and tribunals regarding the precautionary principle is mostly focused on the lengthy (and often not very illuminating) discussions whether or not it has already acquired the status of international customary law or general principles of law.

We should also be aware of the phenomenon, which has been commented on by Professor Bodansky, of the existence of a divergence between the traditional theory of international law based on consistent and uniform State practice and the norms 'generally espoused as customary', which defy classical tests of international customary law.[9]

This is especially visible in international environmental law. There are very few principles established as norms of international customary law. Bodansky argues that in the majority of cases principles acknowledged as well-established norms of international environmental customary law came about by way of verbal discourse between States rather than by their behaviour, thus giving rise to a phenomenon termed by Bodansky as 'declarative international environmental law'. However, this author states:

> These functions of international environmental norms do not depend on a norm's legal status. Whether the duties to prevent transboundary pollution or the precautionary principle are part of customary international law, they will set the terms of international discussions and serve as the framework for negotiations. If so, the current debates over the legal versus non-legal status of these norms are of little consequence. They would matter if dispute resolution were

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[7] *Ibid.*, at 17–18.

[8] Freestone II, *supra* note 2, at 26.

[9] Bodansky III, *supra* note 2, at 105. It is not a new phenomenon it was, e.g., noticed by Sir Robert Jennings in 1982, when he stressed that often what is perceived as international customary law does not 'even faintly resemble' it: R. Jennings, 'The Identification of International Law', in B. Cheng (ed.), *International Law: Teaching and Practice* (1982) 5.

> more prevalent, But so long as courts and arbitrators play a minor role, these debates will remain a sideshow. Rather than continue them, our time and effort would be better spent attempting to translate the general norms of international environmental relations into concrete treaties and actions.[10]

The generalizations concerning the application of this principle in various States based on incorrect or simplistic comparative studies may be dangerous.

According to Professor Wiener such an approach to comparative studies has many pitfalls, due not only to inadequate data collection but also to methodological issues. Therefore, he finds statements that the European approach is more precautionary than the American to be incorrect.[11] He submits several reasons in support of his claim: no general macro conclusions can be derived from a few cases, which unfortunately is often the case; comparisons may be made in full ignorance of the law in both Europe and the US; the research can be only one dimensional, i.e. disregarding the context of other related principles, institutions and equivalent doctrines appearing under other names, as well as the differentiation 'between law in books and the law in action';[12] wide comparisons disregard variations within each legal system (States of the European Union and states in the US); broad comparisons may result in a focus on current events, and overlook the dynamic past and also future changes, of which current events may form a part and represent only a climax or ending of this dynamic process; differences and contrasts between groups may be exaggerated, even when they are minimal; finally, flawed comparative studies may be an exercise in confirming the conclusions previously reached by the author on what type of law is required.[13] Wiener concludes:

> [b] road and catchy depictions miss the true complexity and dynamism of vast and interactive social systems . . . we need caution about precaution, and about comparisons of national precaution. That does not mean, however, that we should look only at the details and never step back to see the bigger picture; on the contrary, we must look at both details and the whole systems.[14]

The same author instead proposes the model of 'hybridization', i.e. the exchange of legal concepts across systems, a process 'from which we can

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[10] Bodansky III, *supra* note 2, at 105.

[11] J. Wiener, 'A Comment on the Comparison and Evolution of Risk Regulatory Systems', 13 *Duke J. Comp. & Int'l L.* (Special Issue 2003) 207, at 207–62

[12] Wiener, *supra* note 11, at 250–53.

[13] *Ibid.*, at 255.

[14] *Ibid.*

learn a great deal, and to which we can contribute'.[15] Recent publications by the same author depict even more forcefully the tantalizingly complicated character of the precautionary principle.[16]

It appears that the way forward at the stage of the development of international environmental law is to abandon the analysis of whether the precautionary principle already fulfils the standards set for a norm of international customary law and to concentrate on the circumstances in which the precautionary principle is applied and variations in its implementation. The above comment does not in any way minimize the value and the usefulness of the studies which undertook the quest for the normative status of this principle, which at the earlier stages of the investigation of the principle's legal character played a very important role in the attempts to clarify its general legal definition.[17]

International environmental law is notoriously uncertain in relation to the normative content of its norms.[18] There are many factors which contribute to this state of affairs, one of them, for example, being the method of international law making, which in many cases is based on the principle of the balancing of the interests of all interested parties, such as the management and apportionment of rights in relation to international watercourses and the responsibility of States for environmental damage, which relies to a certain degree on this principle. Other factors, which play a significant role in environmental norm-setting, are the competing interests and differentiation in the legal position of developed and developing States, i.e. the competing interests and differentiation are reflected in the principle of common but differentiated responsibilities.

Therefore, Dworkin's[19] rigid division of the law into rules (as strictly binding) and principles (flexible instruments the legal context of which is ambiguous) is very difficult to apply in the context of international environmental law, where a treaty may contain various types of norms. As Boyle has explained, some treaties may generate only principles but not rules, which do not have the force of hard law. Such a treaty 'may be potentially normative, but still "soft" in character, because it articulates "principles"

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[15] *Ibid.*, at 262 & 254–62.

[16] Wiener, *supra* note 2, at 598–611.

[17] See, e.g., the extremely well researched monograph of Trouwborst: Trouwborst I, *supra* note 2.

[18] In Sadeleer's view three factors explain why environmental norms have become uncertain: the 'increasing influence of regulatory flexibility, evolving and controversial scientific and technical data, and the shattering of traditional legal boundaries': de Sadeleer, *supra* note 1, at 255.

[19] R. Dworkin, *Taking Rights Seriously* (1977).

rather than "rules". They, however, should 'not be confused with "non-binding" law'.[20] As an example of this Boyle gives the 1992 United Nations Framework Convention on Climate Change, where such principles are included in the text of the treaty (for example Article 3 Principles[21]). As the same author observed, the elements of Article 3 are drawn directly from the non-binding Rio Declaration on Environment and Development. These principles are not only a part of the Climate Change Convention but also reflect principles which are emerging at the general level, common to environmental law, but which have not achieved the status of customary international law. However, they are phrased in an aspirational manner, for example, through the use of the word 'should'. Their content is not certain and precise. They are, however, 'relevant to interpretation and implementation of the Convention as well as creating expectations relating to matters that must be considered in good faith in the negotiation of further instruments'.[22]

It may thus be concluded that:

> Sustainable development, intergenerational equity, or the precautionary principle are all more convincing seen in this sense: not as binding obligations which must be complied with, but as principles, considerations or objectives to be taken account of – they may be soft, but they are still law.[23]

This statement in the view of the present author sums up the discussion. The endless analysing of the legal character of the norms of international environmental law is a somewhat fruitless exercise, which in fact has very little practical significance. There is no answer to whether some of the constructions (to which the precautionary principles belong) of international environmental law are rules or principles or belong to the category of soft law. The importance which States attach to international obligations is not exclusively conditioned by the legal nature of these obligations: '[t]he schematic distinction between those obligations that are and those that

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[20] A. Boyle, 'Some Reflections on the Relationship of Treaties and Soft Law', in V. Gowllad-Debbas (ed.), *Multilateral Treaty-making: The Current Status of Challenge to and Reform Needed in the International Legislative Process* (2000) 25, at 32.

[21] '[I]n their actions to achieve the objective of the Convention and to implement its provisions, the parties shall be guided, inter alia, by the following: 1. The Parties should protect the climate system for the benefit of present and future generations of human kind, on the basis of equity and in accordance with their common but differentiated responsibilities . . . 2. The Parties should take precautionary measures to anticipate, prevent, or minimize the causes of climate change and mitigate its adverse effects . . . 3. The Parties have a right to, and should, promote sustainable . . .'

[22] Boyle, *supra* note 20, at 33.

[23] *Ibid.*, at 34.

are not legally binding does not necessarily offer insights in the constraint obligations imposed on states'.[24]

Practice in the field of environmental law makes it clear that this is a much more diffuse process:

> The principle of sustainable development has induced expectations as to the conduct of States, can be used to claim from other States that they adjust their policies and indeed have begun to act as *de facto* constraint on policy-makers. This no way is dependent on its recent inclusion in the legally binding 1992 Helsinki and Paris Conventions. In the continuous assessments States make as to which of the large number of prescriptions for preventive action are important and are complied with, the legal nature is only one of the relevant factors. The relevance of the legal nature cannot be taken for granted and can only be assessed on a case by case basis.[25]

Lengthy arguments about what are the legal effects of non-binding instruments are futile and do not constructively contribute to a general understanding of such phenomena as the precautionary principle, which really escapes rigid definitional constraints.[26] Equally, the debate whether it is 'precautionary approach' (not 'principle') is without merit, due to the fact that the concept of precaution 'means different things in different contexts'.[27]

However, the contrasting view, including that of Judge Laing of the International Tribunal for the Law of the Sea ('the ITLOS') in the *Bluefin Tuna* case (see below, pp. 11 et seq.), was expressed that such distinction is meaningful, as 'approach' indicates a more flexible approach than the principle and, according to Judge Laing, 'tends, though not dispositively, to underscore reticence about making premature pronouncements about desirable normative structures'.[28]

The question may be asked, therefore, what is the substance of the precautionary principle, and whether its certain features can be identified? Traditionally, the precautionary principle was approached in two forms: the weak and the strong. The weak one is exemplified by the

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[24] A. Nollkaemper, *The Legal Regime for Transboundary Water Pollution: Between Discretion and Constraint* (1993) at 252.

[25] *Ibid.*

[26] However, see Prosper Weil, who was of the view that law either is binding or is not law: P. Weil, 'Towards Relative Normativity in International Law', (1983) 77 *AJIL* 413, at 413–42, especially at 416–417.

[27] P. Birnie and A. Boyle, *International Law and the Environment*, (2002) at 116.

[28] *Southern Bluefin Tuna Cases (New Zealand* v. *Japan; Australia* v. *Japan), Provisional Measures*, Order of 27 August 1999, ITLOS (Separate Opinion of Judge Liang), at para. 19. See also the comments of Professors Birnie and Boyle; Birnie/Boyle, *supra* note 27, at 116.

formulation of Principle 15 of the 1992 Rio Declaration on Environment and Development:

> 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.

The strong version is to be found, according to some authors, e.g. in the 1982 United Nations World Charter for Nature, which states that when 'potential adverse effects are not fully understood, the activities should not proceed'. The other example is the well-known 1998 Wingspread Declaration: '[w]hen an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically'.[29]

The weak version of the precautionary principle does not appear to cause controversy. The strong version, however, was subject to relentless (if not crushing) and very sophisticated criticism by Sunstein, the detailed presentation of which exceeds the confines of this chapter. The starting point of his analysis was defining the precautionary principle as 'hopelessly vague'.[30] The stronger version is not limited to threats of serious or irreversible damage and encompasses the reversal of the burden of proof. It may be said, however, that the division into these two forms is not always followed by scholars and practitioners, and frequently the two types are merged together.

In broad brushstrokes Sunstein argues that the tendency to rely on the precautionary principle results from cognitive and emotional responses which unduly stress highly visible or readily visualizable risks which have a low likelihood of occurrence, thus instilling fear and provoking regulatory responses which are not commensurate with the risk.[31] Sunstein analyses

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[29] The 1998 Wingspread Statement on the Precautionary Principle, available online at: http://www.gdrc.org/ugovprecaution-3.html (last visited on 20 June 2008). On this aspect of the precautionary principle see in depth several publications of Cass R. Sunstein: first, his seminal book C.R. Sunstein, *Laws of Fear: Beyond the Precautionary Principle* (2005) (hereinafter Sunstein I); also C.R. Sunstein, 'The Paralysing Principle', 25 *Regulation* (Winter 2002–2003/4) 32, at 32–7 available online at: http://www.cato.org/pubs/regulation/regv25n4/v25n4-9.pdf (last visited on 20 June 2008) (hereinafter Sunstein II); C.R. Sunstein and R.W. Halm, 'The Precautionary Principle as a Basis for Decision-Making', 2 *The Economists' Voice* (2005) 1, at 1–10, available online at: http://www.bepress.com/cgi/viewcontent.cgi?article=1079&context=ev (last visited on 20 June 2008).

[30] Sunstein I, *supra* note 29, at 26.

[31] *Ibid.*, at 92.

the relationship between the precautionary principle and cost-benefit analysis (CBA), and concludes that the CBA is more advantageous in its implementation as it offers a more coherent approach and is more versatile in embracing a broader spectrum of issues than the precautionary principle. The ubiquitous presence of the precautionary principle is often a result of its strategic use by self-interested political actors. It is perhaps worth presenting Sunstein's reasons for his extensive criticism of this principle:

> [I] have argued not that the Precautionary Principle leads in the wrong directions, but that if it is taken for all that it is worth, it leads in no direction at all. The reason is that risks of one kind or another are on all sides of regulatory choices, and it is therefore impossible, in most real-world cases, to avoid running afoul of the principle. Frequently, risk regulation creates a (speculative) risk from substitute risks or from foregone risk-reduction opportunities. And because of the (speculative) mortality and morbidity effects of costly regulation, any regulation – if it is costly – threatens to run afoul of the Precautionary Principle. We have seen that both regulation and non-regulation seem to be forbidden in cases involving nuclear power, arsenic, global warming, and genetic modification of food. The Precautionary Principle seems to offer guidance only because people blind themselves to certain aspects of the risk situation, focusing on a mere subset of the hazards that are at stake. To some extent, those who endorse the principle are responding to salutary political or moral motivations that it might be thought to embody. Well-organized private groups sometimes demand conclusive proof of harm as a precondition for regulation; the demand should be resisted because a probability of harm is, under many circumstances, a sufficient reason to act. Both individuals and societies sometimes have a tendency to neglect the future; the Precautionary Principle might be understood as a warning against that form of neglect. There are good reasons to incorporate distributional considerations into risk regulation; the Precautionary Principle seems, some of the time, to be a way to protect the most disadvantaged against risks of illness, accident, and death. The problem is that the Precautionary Principle, as applied, is a crude and sometimes perverse method of promoting those various goals, not least because it might be, and has been, urged in situations in which the principle threatens to injure future generations and harm rather than help those who are most disadvantaged. A rational system of risk regulation certainly takes precautions. But it does not adopt the Precautionary Principle[32]

B. The Jurisprudence of International Courts and Tribunals

The jurisprudence of international courts and tribunals is extensive and largely inconclusive on the precautionary principle. However, the International Tribunal for the Law of the Sea (the 'ITLOS'), in the view of the present author, came up with very valuable and original observations, especially in the *MOX* case in which it approached precaution from a new

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[32] Sunstein II , *supra* note 29, at 35.

angle. The ITLOS made pronouncements on the precautionary principle on the occasion of the requests for provisional measures in the *Southern Bluefin Tuna* (hereinafter '*Bluefin Tuna*')[33] and the *MOX* cases.[34]

In the first of these cases,[35] the Applicants, New Zealand and Australia, based their claim, *inter alia,* on the precautionary principle. In their view, in the absence of agreement or scientific consensus concerning the conservation of seriously depleted stocks, all interested parties should act in a precautionary manner. The Applicants claimed that the stocks of bluefin tuna were seriously depleted, and were at their historically lowest levels, without reliable indications of stock recovery.[36]

Although the Tribunal's Order did not deal directly with the nature of the precautionary principle, it, however, made certain interesting general and practical observations. First, the ITLOS Order used the term 'caution' rather than the precautionary principle. The most important is paragraph 77 of the Order, which states as follows:

> *Considering* that, in the view of the Tribunal, the parties should in the circumstances act with prudence and caution to ensure that effective conservation measures are taken to prevent serious harm to the stock of southern bluefin tuna . . . [paragraph 77][37]

Paragraphs 79 and 80 of the Order are also relevant:

> *Considering* that there is a scientific uncertainty regarding their efforts to cooperate with other participants in the fishery for southern bluefin tuna with a view to ensuring conservation and promoting the objective the optimum utilisation of the stock . . . [paragraph 79];

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[33] *Southern Bluefin Tuna Cases (New Zealand* v. *Japan; Australia* v. *Japan), Provisional Measures*, Order of 27 August 1999, ITLOS.

[34] *The MOX Plant Case (Ireland* v. *United Kingdom), Provisional Measures,* Order of 3 December 2001, ITLOS; see also N. Halde, 'La Cour de Babel: Entre L'Incertitude Scientifique et L'Instabilite Juridique – Un Case d'Analyse: L'Affaire MOX', *Revue Québécoise de Droit International* (Hors-Série) (2007) 199, at 199–221.

[35] There are numerous publications on these cases, e.g., K. Leggett, 'The Southern Bluefin Tuna Cases: ITLOS Order on Provisional Measures', 9 *RECIEL* (2000) 75, at 75–9; H. Schiffman, 'The Southern Bluefin Tuna Case: ITLOS hears its First Fishery Dispute', 2 *Journal of International Wildlife & Policy* (1999) 318, at 318–33; A. Fabra, 'The LOSC and the Implementation of the Precautionary Principle' 10 *YBIEL* (1999) 15, at 15–24; Freestone II, *supra* note 2.

[36] Other points raised by the Applicants in their request for provisional measures against Japan were: taking stock over and above the jointly agreed limits was in contravention of the obligation to conserve depleted stocks and contrary to the obligations of Japan to conserve South Bluefin tuna stocks under Articles 64 and 116–119 of the 1982 LOS Convention; Japan failed to take measures to conserve the stock in question; and was further endangering it with its unilateral experimental fishing programme.

[37] *Southern Bluefin Tuna Cases, supra* note 33.

and finally:

> *Considering*, that although the Tribunal cannot conclusively assess the scientific evidence presented by the parties, it finds that measures should be taken as a matter of urgency to preserve the rights of the parties and to avert further deterioration of southern bluefin tuna stock . . . [paragraph 80]

It must be noted that the ITLOS phrased the approach as that of 'prudence and caution', thus avoiding using the term 'precautionary principle'.

As was observed, the Order is of importance since it:

> addresses fundamental aspects of putting the precautionary principle into practice, such as risk assessment, the definition of environmental damage, and the implications of a shift of the burden of proof. However, ITLOS's decision also evidences the difficulties of making *effective* use of a precautionary approach, given the need to balance the number of, at times, contradictory interests (that is, the prevention of environmental damage and the economic and social costs of taking precautionary measures) as well as the complexity of operating in the fact of uncertainty.[38]

The same author notes the fundamental aspect of the precautionary principle, i.e. that it is a relative concept and therefore has to be considered on a case-by-case basis.

It was observed by Freestone that the Tribunal in this case followed the sensible application of this principle.[39] As was noted, the ITLOS did not make any qualitative assessment of the scientific evidence before it. It acknowledged that the parties had different views, and that there was scientific uncertainty as to the impact of the experimental fishing programme, as well as to the health of the stock and the necessary measures that might be needed in order for conservation and optimum utilisation.[40] However, it can be argued that the ITLOS prescribed caution rather than the precautionary principle; in fact it followed the premise on which the precautionary principle is founded of taking action without scientific certainty: '[e]ven if ITLOS only urged "caution" on the parties, it did oblige them to suspend possibly damaging activities despite the presence of scientific uncertainty. This is a classic application of precautionary methodology.'[41]

However, Professor Evans expressed a contrasting view:

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38 Fabra, *supra* note 35, at 17.
39 Freestone II, *supra* note 2, at 27.
40 *Ibid.*
41 *Ibid.*, at 32.

> it seems to me that this principle should have no role in an award made by ITLOS under Article 290 (5). Moreover, and despite what it says, it is difficult to see how this Order gives effect to a 'precautionary' approach at all. It is an unfortunate fact that the greatest threat to ABT at the moment comes from an increasing catch of states that are no party to the SBT Convention at all.[42]

Yet another aspect of the Order must be taken into the account: the 'urgency' in adopting measures 'to preserve the rights of the parties and to avert further deterioration of the southern bluefin tuna stock', 'although the Tribunal cannot conclusively assess the scientific evidence presented by parties'. Paragraph 80 of the Order must be read together with Article 290 of the 1982 LOS Convention, in particular paragraphs 1 and 5, which allow the adoption of provisional measures in order to 'prevent serious harm to the marine environment' (paragraph 1) but only in cases when 'urgency of the situation so requires'. The condition of 'urgency' in this Order was subject to different interpretations by the judges in their individual opinions. The urgency of paragraph 5 of Article 290 is linked closely to 'precaution', and required by the Tribunal. Judge Treves inferred the following from the unclear text of the Order:

> While, of course, a precautionary approach by the parties in their future conduct is necessary, such precautionary approach, in my opinion, is necessary also in the assessment by the Tribunal of the urgency of the measures it might take. In the present case, it would seem to me that the requirement of urgency is satisfied only in the light of such precautionary approach.[43]

He further stated:

> In my opinion, in order to resort to the precautionary approach for assessing the urgency of the measures to be prescribed in the present case, it is not necessary to hold the view that this approach is dictated by a rule of customary international law. The precautionary approach can be seen as a logical consequence of the need to ensure that, when the arbitral tribunal decides on the merits, the factual situation has not changed. In other words, a precautionary approach seems to me inherent in the very notion of precautionary measures.[44]

However, this element of the precautionary approach appears also to be of a controversial character. Professor Evans doubts the 'urgent' character

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[42] M.D. Evans, 'The Southern Blue Tuna Dispute: Provisional Thinking on Provisional Measures?', 10 *YBIEL* (1999) 7, at 14.

[43] *Southern Bluefin Tuna Cases, supra* note 33, Separate Opinion of Judge Tulio Treves, at para. 8.

[44] *Ibid.*, at para. 9.

of the matter. He is of the view that the Tribunal contradicted itself in the matter of urgency, since paragraph 81 reads as follows:

> catches taken within the framework of any experimental fishing program should not result in total catches which exceed the levels set by the parties for each of them, except under agreed criteria.

Therefore, he says:

> ITLOS is quite prepared to see an increase in the total catch provided all parties agree to it. It is very difficult to see how this squares with a perceived need for 'prudence and caution' in order to prevent serious harm to the stock (and therefore marine environment).[45]

There was also a time element in this case, which put in doubt the issue of urgency. Japan stated its intention to terminate the EFP four days after the issue of the Order.

Thus, the matter of urgent termination appears to be non-existent. As Evans concluded:

> it appears that the urgency of the need flowed from the ITLOS's favoured approach to the management of dispute at this interim phase. Despite protestations to the contrary, it is difficult to see this approach as a legitimate exercise of the powers provided for in Article 290 (5).[46]

The above case evidences the problems of the practical application of the precautionary principle. First, is it a principle or an approach? What are the circumstances of its applicability – is urgency a required element of precaution; or perhaps is it only a necessary procedural requirement of the provisional measures, as stipulated in Article 290(5) of the 1982 LOS Convention, which has nothing to do with precaution (a view which may be inferred from the Separate Opinion of Judge Vukas and of Professor Evans' essay).

In the *MOX Plant* case, the precautionary principle constituted one of the bases of the claim submitted by Ireland. However, the Statement of Claim did not shed more light on the very nature of this principle: precaution, the precautionary principle and precautionary approach were used interchangeably, which in fact proves the point that such distinctions bear

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[45] Evans, *supra* note 42, at 12.

[46] *Ibid.*, at 13; see also *Southern Bluefin Tuna Cases, supra* note 33, Dissenting Opinion of Judge Vukas.

very little practical importance.[47] However, the Order of the Tribunal is very interesting, as it further evidences the complex character of the precautionary principle. Unlike in the *Bluefin Tuna* case, the ITLOS applied generally stricter standards in its prescription of the provisional measures, as well as in relation to the precautionary principle. The most important, in the view of the present author, is paragraph 75 of the Order, in which the Tribunal stated:

> *Considering* that the United Kingdom argues that Ireland has failed to supply proof that there will be either irreparable damage to the rights of Ireland or serious harm to the marine environment resulting from the operation of the MOX plant and that, on the facts of this case, the precautionary principle has no application.[48]

Important conclusions may be drawn from this succinct paragraph. First, it appears that there is no general rule of application of the precautionary principle, but recourse to it appears to be discretionary, depending on the case. The ITLOS did not really present a full explanation of why it found this principle inapplicable in the *MOX Plant* case. In the view of the present author, Ireland, in its Statement of Claim, submitted a quite well founded justification for the applicability of this principle in cases regarding radioactive materials. Secondly, the ITLOS stated that Ireland failed to provide evidence of impending serious damage to the environment, and on the facts of the case the precautionary principle had no application. From this statement it may be inferred that the ITLOS did not rely on one of the elements (if a controversial one) of the precautionary principle, i.e. reversal of the burden of proof,[49] since it stated that it was Ireland which failed to submit convincing evidence.

The ITLOS also did not find urgency in this situation requiring and justifying the prescription of the provisional measures (paragraph 81 of the Order). It is of interest that Ireland relied on the precautionary principle as the principle 'applicable to the interpretation of each and every provision of LOSC upon which Ireland relies, including the interpretation of

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47 *The MOX Plant Case, supra* note 34.

48 *Ibid*., at para. 75.

49 This is widely accepted in doctrine: see e.g. Cameron/Abouchar II, *supra* note 2; see also *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests* (*New Zealand v. France*) *Case*, Order of 22 September 1995 [1995] ICJ Rep. 288 (Dissenting Opinion of Judge Weeramantry), at 348 et seq.

"urgency" under Article 290 (5) LOSC' (paragraph 97 of the Statement of Claim) and that:

> Ireland further submits that the precautionary principle might usefully inform the assessment by the Tribunal of the urgency of the measures it is required to take in respect of the operation of the MOX plant [paragraph 148 of the Statement of Claim].

In the view of the present author, paragraph 84 of the Order is of the utmost importance for the further development of the precautionary principle (although it is phrased as 'prudence and caution'), in that the ITLOS structured the obligations of the parties under this principle in an innovative and original manner.

Paragraph 84 reads as follows:

> *Considering* that in the view of the Tribunal, prudence and caution require that Ireland and the United Kingdom cooperate in exchanging information concerning risks or effects of the operation of the MOX plant and in devising ways to deal with them, as appropriate.

Thus, the ITLOS linked 'prudence and precaution' (or the precautionary principle), with the basic contemporary principle underlying international environmental law: cooperation in exchanging information.[50] It is an approach which perhaps may serve as some guidance for States in their application of this principle.

The ITLOS followed it up in the operative part of the Order, in which it prescribed that both States should cooperate and for that purpose enter into consultations forthwith, in order to (a) exchange further information with regard to possible consequences for the Irish Sea arising out of the commissioning of the MOX plant; (b) monitor risks or the effects of the operation of the MOX plant for the Irish Sea; (c) devise, as appropriate, measures to prevent pollution of the marine environment which might result from the operation of the MOX plant.

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[50] There are numerous international environmental conventions, both general and regional, which incorporate this requirement. A very good example of the first type is the 1997 United Nations Convention on Non-Navigational Uses of International Watercourses, 36 ILM (1997) 700. It introduces general obligations of cooperation (Article 8) and exchange of data and information (Article 9). This instrument also relies on very extensive obligations to inform on planned measures. These duties on a regional level are incorporated in the 1992 Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea, *supra* note 3, e.g. Articles 13 (Notification and consultation on pollution incidents); 14 (Co-operation in combating marine pollution); 16 (Reporting and exchange of information); 17 (Information to public). In light of paragraph 75 of Order it would appear to be that the ITLOS considers 'prudence and caution' as different from precautionary principle.

Judge Treves, however, gave an interpretation of the precautionary principle which was linked with what he called procedural rights. He observed that:

> I fully understand the reluctance of the Tribunal in taking a position as to whether the precautionary approach is binding principle of customary international law. Other courts and tribunals, recently confronted with this question, have avoided to give an answer. In my opinion, in order to resort to precautionary approach for assessing the urgency of the measures to be prescribed in the present case, is not necessary to hold the view that this approach is dictated by the rule of customary international law. The precautionary approach can be seen as a logical consequence of the need to ensure that, when the arbitral tribunal decides on the merits, a precautionary approach seems to me to be inherent in the very notion of provisional measures [paragraph 8].

Further he stated that:

> Prudence and caution were nonetheless mentioned in paragraph 84 as requiring cooperation and exchange of information which are the content of the measures prescribed by the Tribunal. It may be discussed whether a precautionary approach is appropriate as regards the preservation of procedural rights. It may be argued that compliance with general obligation of due diligence when engaging in activities which might have an impact on the environment [paragraph 9].[51]

Notwithstanding these reservations, he is of the view that the process of cooperation should have beneficial effect on the Parties, such as 'avoiding the aggravation or the extension of the dispute and of bringing what divides the parties into sharper focus before the Annex VII arbitral tribunal meets' (paragraph 10).

Account must be taken of a very illuminating Separate Opinion by Judge Wolfrum. First, he expressed doubts about the customary international law character of the precautionary principle and stressed its opaque character. He made a very important pronouncement on the relationship between the prescription of provisional measures and the precautionary principle. The judge was of the view that Ireland could not rely on the principle:

> [E]ven if the Tribunal had prescribed provisional measures for the preservation the marine environment under the jurisdiction of Ireland, it could have done so only after a summary assessment of the radioactivity of the Irish Sea, the potential impact the MOX plant might have and whether such impact prejudiced the rights of Ireland.

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[51] *The MOX Plant Case, supra* note 34, Separate Opinion of Judge Treves, at para. 9.

Further, Judge Wolfrum argued that such a matter is to be dealt with on its merits by the Arbitral Tribunal. Also noteworthy is a statement by the same judge that prescription of provisional measures is never automatic, and is limited to exceptional cases and cannot be overruled by relying on the precautionary principle. Judge Wolfrum also observed that the *Bluefin Tuna* and the *MOX Plant* cases are not comparable; in the first of these cases, it was agreed by the Parties that tuna stocks were at the lowest possible levels and therefore they were instructed to act with prudence and caution. However, in the second of these cases:

> the Tribunal was in fact being asked to qualify the possible introduction of radioactivity as 'deleterious', without being able to assess evidence about the situation prevailing in the Irish Sea. In my view there was, under the present circumstances, no room for applying the precautionary principle to the prescription of the provisional measures for the preservation of the substantive rights of Ireland on protection of the marine environment.

Lastly, the judge fully agreed with the part of the Order endorsing cooperation between States as a fundamental principle of international environmental law. According to Judge Wolfrum, the duty to cooperate:

> balances the principle of sovereignty of States and thus ensures that community of interests are taken into account *vis-à-vis* individualistic State interests. It is the matter of prudence and caution as well in keeping with the overriding nature of the obligation to co-operate that the parties should engage therein as prescribed in paragraph 89 of the Order.[52]

It may be mentioned as well that Judge Wolfrum appears to attach to the precautionary principle as a consequence of its implementation (though one which has not gained general agreement) the reversal of the burden of proof. Therefore, it may be said that the reversal of proof element which, according to many authors, characterizes only the strong version of the precautionary principle, is often, in views of other authors and practitioners, part and parcel of this principle in general. It also shows that, as was mentioned above, the differentiation between the weak and the strong versions of this principle is often obliterated.

Finally, mention must be made of the *Case Concerning Land Reclamation by Singapore in and Around the Straits of Johor* (*Malaysia v. Singapore*).[53] In this case Malaysia requested the Tribunal to prescribe the provisional

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[52] *The MOX Plant Case, supra* note 34, Separate Opinion of Judge Wolfrum.

[53] *Case Concerning Land Reclamation by Singapore in and Around the Straits of Johor* (*Malaysia v. Singapore*), ITLOS, Order of 8 October 2003.

measures of protection, *inter alia,* on the basis of the serious harm to the marine environment which the reclamation works would allegedly cause. Malaysia also relied upon an anticipated infringement of its own rights under UNCLOS as a further ground for the prescription of provisional measures. In this context it invoked the precautionary principle. Singapore, however, denied the applicability of this principle, as Malaysia had not specified the possible harm and the precautionary principle has not application in circumstances where studies indicate that no serious harm is foreseeable. Moreover, the precautionary principle must operate within the limitations of the exceptional character of provisional measures, which cannot be overturned by the invocation of this principle. The Tribunal, however, could not rule out that, in the particular circumstances of this case, the land reclamation works might have an adverse effect on the environment (paragraph 97 of the Order). In this context the Tribunal mentioned the lack of sufficient cooperation between States (paragraph 97 of the Order). The Tribunal relied upon the formula of 'prudence and caution' regarding the possible implications of land reclamation on the marine environment, which require the establishment by both parties of a 'mechanism for exchanging information and assessing the risks or effects of land reclamation works and devising ways to deal with them in the areas concerned' (paragraph 99 of the Order).

Therefore, as in the *MOX* case, the Tribunal linked the precautionary principle to the establishing of the mechanism for exchanging information, assessing risks and devising methods to deal with risks in areas concerned.

The above analysis of the ITLOS practice in relation to the precautionary principle clearly indicates that its status at present is opaque, its understanding by States differs greatly and its practical application is not uniform. It also indicates that, within the realm of international judicial processes, the notion of the precautionary principle has different normative content and legal elements.

Halde analyses the whole judicial process of the *MOX* case, i.e. not just the proceedings before ITLOS but also those before the arbitral tribunals established on the basis of the OSPAR Convention and Annex VII to UNCLOS and before the European Court of Justice, and, *inter alia*, assessed the role of the precautionary principle in this case. This led him to the general conclusion that the use of the precautionary principle lacked substance and that it had become a procedural arm for delaying the inevitable and that it was unable to influence general international law:

> Le principe de précaution semble devenir de plus en plus une excuse procédurale afin de repousser l'inévitable plutôt que d'appliquer un principe de prévention en amont. Le simple fait que la question de ce principe n'ait peu ou pas été

> abordé dans les affaires précédentes porte l'auteur à penser que l'application du droit international de l'environnement semble être appliqué en parallèle sans toutefois influencer les autres secteurs du droit international public, dont le droit nucléaire. Cependant, le principe de justification n'était-il pas précurseur du principe de précaution? S'ajoute à cela l'insuffisance de connaissances scientifiques des tribunaux confrontés à ces litiges.[54]

The same author, in relation to this case, speculates whether it would not have been wiser for the parties to the dispute to have recourse to the International Court of Justice (ICJ) by way of a *compromis* which would have arrived most probably at the same decision as in the *Gabčikovo-Nagymaros* case, in which the Court encouraged the parties to renegotiate the case in the context of the precautionary principle, rather than to persist with a restrictive legal framework of access to information.[55]

The practice of the ICJ thus far is even less illuminating in this respect. The importance of the precautionary principle was raised in some recent cases before the ICJ. For example, in the 1997 *Gabčikovo-Nagymaros Project* case, Hungary relied on this principle in its pleadings:

> States shall take precautionary measures to anticipate, prevent or minimize damage to their transboundary resources and mitigate adversary effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing such measures . . .[56]

Hungary addressed the principle as being a link between the principle of cooperation and the principle which establishes responsibility for transboundary damage.[57]

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[54] Halde, *supra* note 34, at 218. 'The precautionary principle seems to become more and more a procedural excuse to push back the unavoidable rather than to push forward the application of a principle of prevention. The simple fact that the question of this principle has not much or not at all been approached in the previous cases, leads the author to think that international environmental law seems to be applied in parallel without influencing, nevertheless, other areas of public international law, such as nuclear law. However, wasn't the principle of justification the forerunner of the precautionary principle? One must add to this, the insufficiency of scientific knowledge of the courts confronted with these cases.' (Author's translation.)

[55] *Ibid.*, at 221.

[56] *Application of the Republic of Hungary v. Czech and Slovak Republic on the Danube River*, reprinted in P. Sands et al. (eds), *Principles of International Environmental Law* (1994), vol. II, at 693–8.

[57] Hungary further claimed that Article 12 (of the then International Law Commission ('The ILC') Draft on the Law of Non-Navigational Uses of International Watercourses) and Article 3 of the 1991 Espoo Convention on Environmental Impact Assessment in Transboundary Context ('The Espoo Convention') on notification of measures, which may have possible appreciable adverse effect, represent the law as it then stood. The obligation of notification also includes the duty to consult and negotiate. The text of the Espoo Convention can be found in 30 ILM (1991) 802.

The Court in this case did not find it necessary to dwell on the legal nature of the precautionary principle. It may be of interest, however, that it found that the concerns for its natural environment in the region affected by the *Gabčikovo-Nagymaros Project* expressed by Hungary related to 'essential interests of this State'. However, the ICJ was of the view that Hungary did not provide sufficient evidence that a 'real', 'grave' and 'imminent' 'peril' existed in 1989 to justify the measures adopted by Hungary as the only possible solution.[58]

New Zealand relied on this principle in the 1995 *Request for Examination of the Situation in Accordance with Paragraph 63 of the Judgement of 20 December1974 in Nuclear Tests* (the 'Nuclear Test II case'). It pleaded:

> that France's conduct was illegal in that it causes, or is likely to cause, the introduction into the marine environment of radioactive material. France being under an obligation, before carrying out its new underground nuclear tests, to provide evidence that will not result in the introduction of such material to the environment, in accordance with 'precautionary principle' a widely accepted in contemporary international law.[59]

However, the Court did not address this issue, but it gave rise to many important statements of judges in their individual opinions. The most far reaching Opinion was that of Judge Weeramantry, who argued that this principle was gaining increasing support as part of international environmental law. Following the principle of the reversal of the burden of proof, he was of the view that it was the duty of France to submit the evidence negating the claims of New Zealand. He asserted that, in the absence of evidence by France that nuclear tests were safe, New Zealand

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[58] *Case Concerning the Gabčikovo-Nagymaros Project (Hungary v. Slovakia)*, Judgment of 25 September 1997 [1997] ICJ Rep. 7, at 41–2, para. 54. However, the possibility of the application of such a principle, if the Parties find it necessary, may be found in the following statement of the Court:

> '[t]hat newly developed norms of environmental law are relevant for implementation of the Treaty and that the parties could, by agreement, incorporate them through the application of Articles 15, 18 and 20 of the Treaty. These Articles do not contain specific obligations of performance but require the parties, in carrying out their obligations to ensure that the quality of water in the Danube is not impaired and that the nature is protected, to take new environmental norms into consideration when agreeing upon means to be specified in the Joint Contractual Plan. By inserting these evolving provisions in the Treaty, the parties recognised the necessity to adapt the Project. Consequently, the Treaty is not static, and is open to adapt to emerging norms of international law . . .'

[59] *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*, Order of 22 September 1995 [1995] ICJ Rep. 288, at para. 5.

had established the case *prima facie.*[60] Other judges, such as Judge *ad hoc* Palmer[61] and Judge Koroma,[62] were less enthusiastic in their approach to this principle.

The controversial nature of the precautionary principle was very well evidenced by the 1998 *Hormones in Beef* case before the WTO.[63] This case reflected clearly very divisive approaches to the precautionary principle. The European Community[64] argued that this principle was part of the body of international customary law and was applicable to both assessment and management of a risk, and that it informed the meaning and effect of Article 5.1 and 5.2 of the WTO's Agreement on Sanitary and Phytosantiary Measures (the 'SPS Agreement'). The United States supported the view that it was not a principle but an 'approach', which makes it more flexible as a concept and the content of which is not fixed,[65] and Canada argued that it was only an emerging principle of international law, requiring further crystallization.[66]

The WTO Appellate Body adopted the arguments of the US and Canada and decided that the precautionary principle did not override Article 5.1 and 5.2 of the SPS Agreement, although it stated that it was reflected in the preamble to and Articles 3.3 and 5.7 of the SPS Agreement.[67] The Appellate Body did not find it necessary to make a definite statement as to the status in customary law of this principle. It said, however, that 'the

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[60] '[i]t may be that France has material with which it can satisfy the Court on that issue, but no such material has been offered. Having regard to the course of geological events, a guarantee of stability of such an island formation by hundreds of thousands of years does not seem within the bounds of likelihood of possibility.'

Dissenting Opinion of Judge Weeramantry, *supra* note 49, at 345.

[61] Judge Palmer was of the view that it was difficult to make any statements concerning the status of the precautionary principle without arguments by France addressing this issue: *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*, Order of 22 September 1995 [1995] ICJ Rep. 288 (Dissenting Opinion of Judge Sir Geoffrey Palmer), at 381 et seq.

[62] Judge Koroma expressed the view that New Zealand established a prima facie case that the marine environment was at risk from the underground tests based on scientific evidence and that there might be a duty already 'not to cause gross or serious damage which can reasonably be avoided'.

[63] *EC Measures Concerning Meat and Meat Products* (Hormones Case), WTO Doc. WT/DS48/AB/R, (16 January 1998) (hereinafter *Hormones* Case); see also: J. Scott, 'On Kith and Kine (and Crustaceans): Trade and Environment in the EU and WTO', in J.H. Weiler (ed.), *The EU, the WTO, and the NAFTA: Towards a Common Law of International Trade?* (2000) 125, at 125–67, in particular 146–62.

[64] *Hormones* Case *supra* note 63, at para. 16.

[65] *Ibid.*, at para. 43.

[66] *Ibid.*, at para. 60.

[67] *Ibid.*, at para. 124.

precautionary principle at least outside the field of international environmental law, still awaits authoritative formulation'.[68]

The question, which is very complicated, is the notion of 'sufficient scientific' basis in the SPS Agreement. According to Article 3 paragraph 3, the requirement of sound science is reached by undertaking a risk assessment. The formulation of the risk assessment indicates the precedence of human health over plant or animal safety. Further there is a question of 'sufficiency'. Risk assessment should provide 'sufficient scientific evidence'. However, 'sufficiency' is a relative concept and must be established in each case separately. According to the Appellate Body, there has to be a rational and objective relationship between the findings of the risk assessment and the selection of the SPS measures (as explained in the *Hormones in Beef* case, the evidence must sufficiently warrant or support the measure). Article 5 paragraph 7 of the SPS Agreement does not rule out the possibility of the provisional application of sanitary or phytosanitary measures. This is possible only if insufficient evidence is available on which risk may be assessed. In such cases provisional measures are permissible, provided that they are taken on the basis of available pertinent information; additional evidence is obtained to perform a more objective risk assessment; and the measure is reviewed within a reasonable period of time.[69] It appears from the case law of the Appellate Body that Article 5 paragraph 7 of the SPS Agreement can be relied upon if there is insufficient evidence (not scientific uncertainty – two concepts which are not interchangeable) to permit the risk assessment (*Japan – Apples* case).[70]

Equally, the decision of the WTO Panel in the so-called 2006 *Biotech* case is not very illuminating from the point of view of analysing the nature of the precautionary principle.[71] In this case, the principle was invoked by the European Communities, which asserted that certain genetically modified

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[68] *Ibid*., at para. 123. On the status of this principle on international customary law, the Appellate Body observed as follows:

> 'The precautionary principle is regarded by some as having crystallized into a general principle of customary international law. Whether it is widely accepted by Members as a principle of a general or customary international law appears less than clear. We consider, however, that it is unnecessary and probably imprudent, for the Appellate Body in this appeal to take a position in this important, but abstract, question.'

See also: *Japan – Measures Affecting Agricultural Products*, WTO Doc. WT/DS76/AB/R (22 February 1999), at para. 92.

[69] See in depth, J. McDonald, 'Tr(e)ading Cautiously: Precaution in WTO Decision Making', in E. Fisher et al. (eds), *Implementing Precautionary Principle: Perspectives and Prospects* (2005) 160, at 160–67.

[70] *Ibid*., at 171.

[71] *European Communities – Measures Affecting The Approval and Marketing of Biotech Products*, WTO Doc. WT/DS291/R;WT/DS292/R;WT/DS293/R (29 September 2006).

organisms (GMOs) presented potential threats to human health and the environment. Such a potential threat justifies the assessment on a case-by-case basis and the application of special measures of protection based on the precautionary principle, which, according to the EC, has become a 'fully-fledged principle of international law'.[72] The United States and Canada presented very similar reasoning to that in the *Beef Hormones* case and denied the existence of the precautionary principle, arguing that it was only an approach, due to the lack of one consistent formulation of this principle.

As recently as 2006, the United States strongly disagreed 'that precaution has become a rule of international law' and that precautionary principle cannot be considered a general principle or norm of international law, as it does not have "a single, agreed formulation". The United States argued that this principle has many permutations and different factors. This resulted in the United States labelling it a precautionary 'approach' rather than 'principle'. The United States then continued that, if the precautionary principle is not a principle of international law, or even more so not a rule of international customary law, for the following reasons: (i) it cannot be considered a 'rule' because it does not have a clear content and therefore cannot be said to offer any authoritative guide for States' conduct and (ii) it cannot be said to reflect the practice of States, as it cannot be defined which States embraced this principle; and (iii) considering that precaution cannot be defined, and, therefore, could not possible be legal norm, it cannot be argued that States apply it from a sense of legal obligation.[73]

The Panel observed that the EC did not specify in its submission what is understood by the general principles of international law: principles of customary law or general principles of law, or both.[74] The Panel confirmed the observations as to the character of this principle made in the 1998 *Hormones in Beef* case.

The views of the US and Canada and the decision of both the WTO Appellate Body and the Panel may be criticized generally for their disregard for environmental law. Critics should, however, be mindful of the fact that the WTO is not in principle an environmental organization, but its aim is to eliminate restrictions on trade and to impose non-discrimination and non-protectionism. Therefore, the WTO Dispute Settlement Body will interpret the obligations of the Parties in the light of its objectives.

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[72] *Ibid.*, at 42.

[73] *Ibid.*, at 42–3.

[74] *Ibid.*, at 43. On the difficulties of the application of the precautionary principle in economic theory see J.O. McGinnis, 'The Appropriate Hierarchy of Global Multilateralism and Customary International Law: The Example of the WTO', 33 *Virginia Journal of International Law* (2003/1) 229, at 229–84.

The jurisprudence of the WTO is, however, very instructive as evidence of the general definitional problems and the lack of clarity of the legal character of the precautionary principle, such as the notions of the risk, sufficiency of scientific evidence and scientific uncertainty. As is well known, the formulations of the precautionary principle in various treaties[75] and

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[75] E.g., the 1991 Bamako Convention on the Ban of the Import into Africa and Control of Transboundary Movement of Hazardous Waste Within Africa, 30 ILM (1991) 733, Article 4(3)(f):

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

The 1997 Montreal Protocol on Substances that Deplete Ozone Layer, 26 ILM (1987) 1550, para. 6 of the Preamble says: '[t]he Parties are . . . determined to protect ozone layer by taking precautionary measures to control equitably total global emissions of substances that deplete it . . .'; the 1992 Helsinki Convention on the Protection of and Use of Transboundary Watercourses and Lakes, 31 ILM (1992) 1312, Article 2(5):

> '[t]he precautionary principle, by virtue of which action to avoid the potential transboundary impact of release of hazardous substances shall not be postponed on the ground that scientific research has not fully proved a causal link between those substances on one hand, and the potential transboundary impact, on the other hand.'

This principle was recognized in many marine environment protection conventions, such as the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic, 31 ILM (1993) 1069 (hereinafter the OSPAR Convention). The PARCOM recommendation 89/1 (1989) provides that preventive measures must be taken when where there are 'reasonable grounds for concern . . . even when there is no conclusive evidence of a causal relationship between inputs and their alleged effects'; this procedure was implemented by means of the Prior Justification Procedure of the Oslo Commission, whereby substances may be introduced only if it has been indicated with an acceptable margin of uncertainty that they may not cause harm to the environment. Where this requirement is impracticable, it may be applied at a more general level, i.e. through the application of the best available technology or practice: the 1992 Helsinki Convention on the Protection of the Environment of the Baltic Sea Area, text available at: http.www.helcom.fi (last visited on 10 July 2008). Article 3(2) provides that preventive measures are to be taken when there is a reason to assume that harm may be caused 'even when there is no conclusive evidence of a causal relationship between inputs and their alleged effects'; the 1992 United Nations Framework Convention on Climate Change, 31 ILM (1992) 849, Article 3(3), '[p]arties should take precautionary measures to anticipate, prevent or minimise the cause of climate change and mitigate its adverse effects'; the United Nations Convention on Biological Diversity, 31 ILM (1992) 818, does not expressly apply this principle, but it says in the Preamble to the Convention that the Contracting Parties are '[a]ware of the general lack of information and knowledge regarding biological diversity', and further that 'where is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimise such a threat'.

soft law instruments[76] vary to a great degree.

The national practice of States also lacks uniformity and is inconclusive, even in Germany, which historically has the most developed and sophisticated practice concerning the precautionary principle.[77] However, although the German courts' jurisprudence in the matter of precaution has undoubtedly been very impressive, a certain discrepancy between the far reaching decisions of the courts and the views of the major part of German legal opinion concerning the interpretation of, e.g., Article 7 of Germany's Nuclear Law could be observed in the 1980s.[78] German legal opinion considered that Article 7 was applicable only to protection from or the prevention of hazards. Thus it related only to known dangers, and did not cover anticipation of risks or the prevention of minimal residual risks.[79] It was also noted that '[w]hile legal control is thereby increased, it nonetheless remains marginal in verifying respect for the current state of science and technology' and that:

> German administrative courts will thus exercise their jurisdiction only in order to control the procedural aspects of risks assessment, and it will leave the administration a margin of appreciation concerning of the measures that must comply with the precautionary principle.[80]

An excellent survey of conventions, soft law documents and decisions of international courts and tribunals, which include the precautionary principle approach or adopt the philosophy of the precautionary principle, can be found in UNEP, 'Precaution from Rio to Johannesburg: Proceedings of a Geneva Network Roundtable' (2002), available online at: http://www.environmenthouse.ch/docspublications/reportsRoundtables/Precaution%20Report%20e.pdf (last visited on 20 June 2008).

[76] See, e.g., para. VII of the 1987 Declaration of the Second International North Sea Conference on the Protection of the North Sea, 27 ILM (1987) 835 (the 'London Declaration') : 'in order to protect the North Sea from possibly damaging dangerous substances, a precautionary approach is addressed which may require action to control inputs of such substances even before a causal link has been established by absolute clear evidence'; the 1990 Declaration of the Third International Conference on the Protection of the North Sea ('The Hague Declaration'), 1 *YBIEL* (1990) 658, at 662–73 which states that the parties:

> 'will continue to apply the precautionary principle, that is to take action to avoid potentially damaging impacts of substances that are persistent, toxic and likely to bio-accumulate even where no scientific evidence to prove causal link between emissions and effects.'

[77] Historically, the precautionary principle was first recognized in Germany as *Vorsoge prinzip*. See N. de Sadeleer, 'The Enforcement of the Precautionary Principle by German, French and Belgian Courts', 9 *RECIEL* (2000) 144, at 144–51.

[78] Article 7 of Germany's Atomic Energy Law, which provides that authorization may be granted only if 'the precautions demanded by the current legal level of scientific and technical knowledge are taken against possibility of damage caused by the establishment or operation of the installation': cited in de Sadeelar, *supra* note 77, at 145.

[79] de Sadeeler, *supra* note 77, at 145–6.

[80] *Ibid.*, at 146–7.

The above further evidences the practical problems relating to the precautionary principle, even in States where it is widely recognized and applied, and shows different ways in which it is interpreted and understood by various national institutions (administrative and judicial), confirming its unclear character and ill-defined function.

C. Certain Views from Doctrine

The precautionary principle is contained in soft and hard law instruments.[81] The foremost example of such a soft law instrument is Principle 15 of the 1992 Declaration on Human Environment and Development (the 'Rio Declaration'), which is considered to be the most authoritative statement of this principle,[82] notwithstanding its general and rather vague formulation. It is noteworthy, too, that there is no uniform standard of its implementation since it is to be 'widely applied by states according to their capabilities', a condition which puts further in doubt the possibility of a precise (or universal) definition of the precautionary principle, as it has different meaning and application world-wide.

Equally, the views of doctrine reflect the uncertain status of the precautionary principle in international and national practice. Even the most ardent supporters of this principle, such as Professor Sands, admit that '[t]here has been no uniform understanding of its meaning, amongst states or commentators'.[83] Elsewhere the same author states:

> at the more general level, it means that states agree to act carefully and with foresight when taking decisions which concern activities that may have an

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[81] See de Sadeleer on the survey of various national systems, both hard and soft law regulations: de Sadeleer, *supra* note 1, at 330–9; See also L. Larsen, 'The Precautionary Principle in Belgian Jurisprudence: Unknown, Unloved?', 1 *European Environmental Law Review* (1998) 74, at 74–82. Interestingly, in India, the precautionary principle is pronounced as 'part of the law of the land': e.g., *Vellore Citizens' Welfare Forum*, AIR 1966 SC 2715, cited in M. Anderson, 'International Environmental Law in Indian Courts', 7 *RECIEL* (1998) 21, at 26; See also Simon Marr, who said '[t]here is no uniform understanding of the meaning of the precautionary principle among states and members of the international community' S. Marr, 'The Southern Bluefin Tuna Cases: The Precautionary Approach and Conservation of Fish Resources', 11 *EJIL* (2000) 815, at 821.

[82] Principle 15 reads as follows:

> '[I]n 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, the lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.'

[83] P. Sands, 'Pleadings and the Pursuit of International Law: Nuclear Tests II (New Zealand v. France)', in A. Anghie and G. Sturgess (eds), *Legal Visions of the 21st Century: Essays in Honour of Judge Christopher Weeramantry* (1998) 601, at 623.

> adverse impact on the environment. A more focused interpretation provides that the principle requires activities and substances which may be harmful to the environment to be regulated, an possibly prohibited, even if not conclusive or overwhelming evidence is available as to the harm or likely harm they may cause to the environment.[84]

Similarly, Professor Boissons de Chazournes claims that, although this principle has not yet achieved an unambiguous status in international law, it can nonetheless be considered as an emerging customary norm. However, the same author admits that:

> It is difficult to determine precisely technically speaking, what precautionary principle means in environmental law. Is precaution a 'standard', an 'approach', or a 'principle' in the legal sense? Elements of an answer can be found in international practice.[85]

Serious criticism of the precautionary principle is based on its 'subjectivity', i.e. that it relies fundamentally on subjective criteria to activate it. Therefore, the notions fundamental to the nature of this principle, such as 'threats of serious or irreversible damage' or 'reasonable grounds' or 'potential adverse effects', cannot be translated into legal terms since they are based on subjectivity. Even notions which are well defined pose certain problems. For example, although the definition of what is 'toxic' exists; it is really unclear what toxic means, since the effects of toxicity can vary depending on species. Moreover, criticism was expressed concerning the inherent concept of relying on suspected effects instead of basing the precautionary principle on existing solid scientific evidence, in cases when these (the evidence) are available in combination with a sound monitoring strategy in order to make a risk assessment. In such cases only objective tests should be used.[86]

However, as one of the authors phrased it, risk is 'a slippery concept' and risk assessment methods are controversial, riddled with uncertainty and subjectivity. Therefore, as Marr sums up, for some authors the numeric estimate of risk is meaningless and for the others it is 'an art'.[87] The differences in opinion have their source in the approach to risk management. One school of thought sees risk management as subjective, since danger

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[84] P. Sands, *Principles of International Environmental Law* (2nd edn, 2003), at 272.

[85] L. Boissons de Chazournes, 'The Precautionary Principle', in UNEP, *Precaution from Rio to Johannesburg: Proceedings of a Geneva Network Roundtable* (2002) 10, at 12.

[86] Marr, *supra* note 2, at 21–2. The same author also mentions the doctrine of 'substantial evidence', which is based on a premise that it is possible to know enough about something to justify its use. For example, in relation to genetically modified crops it is accepted that enough is known about the safety of conventional crops to make it reasonable to eat them: Marr, *supra* note 2, at 22.

[87] *Ibid.*, at 31.

and threat are not only tangible real processes but also influenced by our culture and minds.[88]

There is some agreement amongst authors as to the common features of this principle: (i) regulatory inaction threatens non-negligible harm; (ii) there is a lack of scientific certainty on the cause and effects relationship; and (iii) under these circumstances regulatory inaction is unjustified. A slightly different set of elements, however, in the view of the present author, which fully reflected the complicated nature of this principle, was presented by Professor Boissons de Chazournes. She focuses on four distinguishing features of this principle: risk; damage; scientific uncertainty; and differentiated capabilities. As to risk, she states that this is not a defining factor. She explains that risk is a predictable potential danger, which may result in damage. Precaution has evolved and now relates to a new type of risk in international law, an ecological one, the assessment of which is not defined in international law and has to be found in practice. Risk implies damage, which is defined by its threshold ('irreversible'; 'grave'), so the application of precaution is somewhat limited. Scientific uncertainty, according to the same author, represents the main condition for the application and legitimization of this principle and constitutes the difference between prevention (which relies on science) and precaution. She argues that the extent

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[88] *Ibid.* and B. Lomborg, *The Sceptical Environmentalist: Measuring the Real State of the World* (2001), at 338, 350. Risk assessment plays a fundamental role in barriers to international trade. As Kiss and Shelton observe:

> WTO cases show that panels require the identification of real risks as sine qua non for trade barriers to be compatible with the GATT/WTO regime and especially with bans permitted by the Sanitary and Phytosanitary (SPS) Agreement. In various cases, the dispute settlement panels and the Appellate Body have established the contours of GATT-acceptable risk assessment procedure: (1) risk assessment should set out both the prevailing view and opinions taking a divergent view; (2) there is no requirement to establish a minimum threshold level of risk and states may set zero risk as the level it will accept; (3) risk must be ascertainable and not theoretical, but ascertainable potential is enough; (4) the criteria used by the state must include all risks and their origin with a degree of specificity. Perhaps most importantly, there must be a rational or objective relationship between the SPS measure and the scientific evidence. In cease, where it is not possible to conduct a proper risk assessment, Article 5 (7) of the SPS Agreement allows to adopt and maintain a provisional SPS measure. According to WTO Panel and the Appellate Body, this provision incorporates the precautionary principle to a limited extent, when four cumulative criteria are met: (1) the relevant scientific information must be insufficient; (2) the measure should be adopted on the basis of available information; (3) the member must seek to obtain the additional information necessary for a more objective assessment of risk; (4) the member must review the measure accordingly within a reasonable period of time established on a case by case basis depending on specific circumstances, including the difficulty of obtaining additional information needed for review and the characteristics of the SPS measure.
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> A. Kiss and D. Shelton, *International Environmental Law* (2004), at 251.

of the precautionary principle must be based on a minimum knowledge which is on the basis of scientific results that have achieved some degree of consistency. Precaution is an evolving, not a static, process due to the regular reassessment of risk involved; a process which leads to revaluation of the decisions adopted in relation to public health and the environment. Therefore the question arises whether the law can manage uncertainty, and whether it can be better defined in political rather than legal terms.

Finally, the problem of the capabilities of States is related to the issue of proportionality, which means that States cannot be subject to the same obligations stemming from the application of the precautionary principle. The assessment of the precautionary principle will vary from State to State, depending on economic, financial and technological capabilities, in relation to risk management.[89]

Finally, States often blur the differences between soft and hard law instruments in international environmental law. State practice is very inconclusive on this subject. States often promulgate soft law in their municipal order in the same manner as hard law, and for example pass such instruments through parliamentary procedures, which may lead to an erroneous conclusion that a soft law instrument was promulgated in domestic law because it has the status of a norm of international customary law. In the view of the present author, this further strengthens the argument that the general discussion on the status of the precautionary principle in international customary law may lead to misleading results and does not really reflect State practice in relation to this principle.

In conclusion, it may be said that there are very few features of the precautionary principle which are not disputed, and that this is clearly indicated by the varied practice of States, the jurisprudence of international courts and tribunals and views of doctrine.

It appears that the role of the precautionary principle is primarily in risk management and that it is one of its few uncontested features (being mindful, however, about the ambiguous character of the risk itself).[90]

Therefore, as certain authors suggested, the way forward is not to engage in an inconclusive discussion as to the legal status of this principle, but rather to examine particular regimes. That approach was precisely one of the outcomes of the Johannesburg Summit, i.e. the departure from the analysis of the

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[89] Boissons de Chazournes, *supra* note 85, at 11.

[90] In the view of the present author, there is, also in some cases, not a very clear division between this principle and the environmental impact assessment (the 'EIA'), in particular in relation to the new international legal instruments which deal with the Strategic Impact Assessment (the 'SIA'). This type of far reaching assessment is included in the 2003 Protocol on Strategic Environmental Impact Assessment to the 1992 Convention on the Environmental Impact Assessment (the 'Espoo Convention').

status of this principle in favour of 'its affirmation, the recognition of its relevance as a complement to science -based decision making, and its integration in social and development agendas' (such as human health and the need for assistance to strengthen developing countries' capacities).[91] Precaution is included in the Plan of Implementation (Chapter X), which reaffirms Principle 15 of the Rio Declaration. The issues concerning precaution were also raised in connection with the Agenda 21 commitment to sound management of chemicals and hazardous wastes, in relation to which States decided to follow transparent science-based risk assessment and management procedures, observing the requirements of the application of the precautionary principle.[92] The same authors concluded that concern for human health, together with the provision of support for developing countries, added a clearer social and developmental dimension to the precautionary principle.[93] However, it may be added that the character of this principle calls for its cautious application, which will involve a proportionality test including the balancing of costs and benefits.[94]

III. IMO, INTERNATIONAL CONVENTIONS AND THE PRECAUTIONARY PRINCIPLE

A. The International Maritime Organization (IMO)

1. Introductory

In order to assess the commitment of the IMO to the precautionary principle, it is necessary to review a few of the existing international conventions, which were negotiated within that organization and sponsored by it.

It is intended to review in depth the global conventions (the 73/78 Convention for Prevention of Pollution from Ships (the MARPOL73/78 Convention) and the 1972 London Convention) which were signed under the auspices of the IMO, as well as to analyse related conventions which are more recent.

This approach will enable us to ascertain whether the precautionary principle is applied by States parties to the IMO conventions which were negotiated and signed before the advent of this principle, and, further, how this principle is accounted for in the newer conventions.

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91 M.-C. Cordonier Seggar et al., 'Prospects for Principles of International Sustainable Development Law after the WSSD: Common but Differentiated Responsibilities, Precaution and Participation', 12 *RECIEL* (2003) 54, at 63.

92 *Ibid*., at 62.

93 *Ibid*.

94 Marr, *supra* note 2, at 23.

There are also other IMO conventions, such the Convention of Intervention of the High Seas in case of Oil Casualties; the Convention on Oil Pollution Preparedness, Response and Cooperation; the International Convention of the Control of Harmful Anti-Fouling Systems; and International Convention for the Control Management of Ships' Ballast Water and Sediments, which will be mentioned in so far as they apply the precautionary approach.

2. MARPOL 73/78[95]

(a) Brief Description of MARPOL 73/78 Underlying Principles

The survey and analysis of IMO practice in relation to the precautionary principle will begin with the 73/78 MARPOL Convention.[96] The Convention's main purpose is to prevent and minimize pollution from ships, both accidental and as a result of routine operations. The Convention consists of the framework (or the 'umbrella') Convention and six technical Annexes: Annex I – Regulations for the Prevention of Pollution by Oil;[97] Annex II – Regulations for the Control by Noxious Liquid Substances in Bulk;[98] Annex III – Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form;[99] Annex IV – Prevention of Pollution by Sewage from Ships;[100] Annex V – Prevention of Pollution by Garbage from Ships; Annex VI – Prevention of Air Pollution.[101]

The MARPOL 73/78 Convention is the main international instrument relating to prevention of pollution of the marine environment from ships. It is a combination of treaties adopted in 1973 and 1978 and updated by way of amendments.[102] Annexes I and II are mandatory for the parties to the Convention, and all other remaining Annexes are optional. As of 31

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95 Entered into force on 2 October 1983 (Annexes I and II).

96 In-depth information on the MARPOL 73/78 can be found on the IMO website: http://www.imo.org/Conventions/contents.asp?doc_id=578&topic_id=258 (last visited on 20 June 2008).

97 Entered into force on 2 October 1983 (revised Annex entered into force on 1 January 2007).

98 Entered into force on 6 April 1987 (revised Annex entered into force on 1 January 2007).

99 Entered into force on 1 July 1992.

100 Entered into force on 27 September 2003 (a revised Annex was adopted in 2004).

101 Entered into force on 19 May 2005.

102 On the MARPOL Convention generally see: D.W. Abecassis et al., *Oil Pollution from Ships: International, United Kingdom and United States Law and Practice* (2nd edn, 1984); R. Churchill and V. Lowe, *The Law of the Sea* (1999); D. Bodansky, 'Protecting Marine Environment from Vessel-Source Pollution: UNCLOS and Beyond', 18 *Ecol.L.Q* (1991) 719, at 719–77.

January 2005, the parties to the MARPOL constitute 97.07% of merchant tonnage and there are 130 contracting parties.[103] This makes their provisions, together with the 'umbrella' Convention, a universal instrument, comprising of 'generally accepted international rules and standards' (in the wording of Article 211 of the 1982 United Nations Law of the Sea Convention), which constitute a minimum standard prescribed by flag States for their merchant ships and which have also become binding on third States through the working of customary international law.[104] The acceptance of the other Annexes is not so extensive.[105]

Amendments to the Convention are adopted on the basis of the so-called tacit procedure (or the 'opting-out' system), on the basis of which any State party to the Convention may 'opt out' of accepting a new amendment within a prescribed period of time, and as a result is not bound by it (Article 16). This procedure makes the application of the Convention patchy and, as observed by some authors, '[t]his undoubtedly complicates the question whether any particular regulation is "generally accepted" when determining what rules a flag state must apply under Article 211'.[106]

Under MARPOL 73/78 the parties undertake to give effect to the provisions of the Convention and those Annexes thereto which bind them, in order to prevent pollution of the marine environment by the discharge of harmful substances or effluents containing such substances in contravention of the Convention (Article 1 paragraph 1).

Article 4 of MARPOL 73/78 provides a double system of national prohibitions and sanctions. First, violations are to be prohibited and sanctions to be established under the law of the Administration[107] of the ship concerned, wherever the violation occurs (Article 4 paragraph 1); and, secondly, violations are to be prohibited and sanctions to be established under the law of the party within whose jurisdiction they occur (Article 4 paragraph 2).

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[103] Data from Summary of Status of Conventions, as at 31 January 2005, are available online at: http://www.imo.org/Conventions/mainframe.asp?topic_id=247 (last visited on 31 January 2005).

[104] See Birnie/Boyle, *supra* note 27, at 363.

[105] Annex III, number of parties, 115, 99% of the world tonnage; Annex IV, number of parties, 100, 54.35% of the world tonnage; Annex V, number of parties, 119, 95.23% of the world tonnage; Annex VI, number of parties, 19, 60.04% of the world tonnage. Source: Summary of Status Conventions, *supra* note 103.

[106] Birnie/Boyle, *supra* note 27, at 363.

[107] 'Administration means the Government of the State under whose authority the ship is operating. With respect to a ship to fly a flag of any State, the Administration is the Government of that State; with respect to fixed and floating platforms engaged in exploration and exploitation of the sea-bed and sub-soil thereof adjacent to the coast over the coastal State exercises sovereign rights for the purpose of exploration and exploitation of their natural resources, the Administration is the Government of the coastal State concerned' (Article 2).

According to MARPOL 73/78, the flag State has to ensure that its ships comply with all the required technical standards. In order to achieve this end, the State has to conduct inspections and issue an 'international oil pollution prevention certificate'. Article 5 of the Convention introduced the far-reaching jurisdiction of the port state. It provides that the inspection must be carried out to confirm that the ship is in possession of a valid certificate or to assess the condition of the ship when there are the clear grounds for believing that its condition does not conform substantially to the certificate.

In cases of stated non-compliance with the MARPOL certificate, Article 7 imposes a duty on the port State not to allow the ship to leave port unless it can do so without presenting an unreasonable threat or harm to the marine environment. However, the port State has an obligation not to delay ships unduly. In the event of such a violation Article 4 paragraph 2 (within the jurisdiction of a party), the party can either cause proceedings to be taken in accordance with its law or furnish such information and evidence as may be in its possession that a violation has occurred (Article 4 paragraph 2(a)–(b) to the Administration of the ship concerned. Article 4 paragraph (1) further provides that, if the Administration of a ship involved in a violation is informed of it and is satisfied that sufficient evidence is available to enable proceedings to be brought, that Administration shall cause such proceedings to be taken as soon as possible, in accordance with its law. It may be also noted that 'any violation' in Article 4 paragraph 2 means that it applies to operational and discharge standards, as well as to design and equipment standards of the Convention.[108] MARPOL 73/78 provides that the parties to the Convention 'shall co-operate in the detection of violations and the enforcement of the provisions of the present Convention, using all appropriate and practicable measures of detection and environmental monitoring adequate procedures for reporting and accumulation of evidence' (Article 6 paragraph 1). Further, it states:

> any Party shall furnish to the Administration evidence, if any, that the ship has discharged harmful substances of effluents containing such substances in violation of the provisions or the Regulations. If it is practicable to do so, the competent authority of the former party shall notify the master of the ship of the alleged violation [Article 6 paragraph 3].

Parties have a duty to furnish to the Administration information on the discharge of harmful substances or effluents. Upon the receipt of such evidence, the Administration so informed is to investigate the matter and may request the other party to furnish further or better evidence of the alleged

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[108] Abecassis et al., *supra* note 102, at 93.

contravention. If the Administration is satisfied that sufficient evidence is available to enable proceedings to be taken in accordance with its law it shall do so as soon as possible. The Administration shall promptly inform the party which has reported the alleged violation, as well as the IMO, of the action taken (Article 6 paragraph 4).

With respect to the ships of non-parties to MARPOL 73/78, the Parties are to apply such requirements as may be necessary to ensure that no more favourable treatment is given to such ships (Article 5). The measures under Article 5 are the source of some doctrinal controversy in so far as they purport to apply to ships flying the flag of non-parties. As an exercise of the jurisdiction of the coastal State over foreign ships, this provision cannot, according to one of the authors, restrict the rights enjoyed by non-parties under the general international law principle *pacta tertiis nec nocent nec prosunt*. According to Willish, the provisions, which oblige parties to apply the requirements of a convention to ships flying the flag of non-parties, is, under this principle, subject to the geographical limitations of a coastal State's jurisdiction as determined by general international law:

> The right to apply the treaty-requirements to non-parties is also subject to the customary right of innocent passage, which, at present, only insofar requires compliance with pollution regulations of coastal states as those regulations do not exceed the customary or treaty obligations in force between both states concerned.[109]

(b) MARPOL 73/78 and the Precautionary Principle Generally

The MARPOL 73/78 Convention, although very far-reaching and innovative in the enforcement of environmental regulations, does not include any explicit provision on precautionary principle. However, the Marine Environment Protection Committee (MEPC) of the IMO on 15 September 1995 adopted a Resolution on Guidelines on the Incorporation of the Precautionary Approach in the Context of Specific IMO Activities.[110] The Resolution relates to Agenda 21 as well as Principle 15 of the Rio Declaration. The precautionary principle was implemented on the basis of this Resolution as an interim measure, 'until further experience with their [i.e. the guidelines] application has been gained'. The Resolution also requested all relevant IMO bodies to review the guidelines and submit

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[109] J. Willish, *State Responsibility for Technological Damage in International Law* (1987), at 115.

[110] Annex 10, MEPC 37/22, Add.1.

comments to the MEPC with a view to their eventual submission to the Assembly for the adoption of guidelines for all relevant IMO activities. The Annex to this Resolution gives specific guidelines on the implementation of this approach. Guidelines rely on Principle 15 of the Rio Declaration as the fundamental definition of the precautionary approach and on Agenda 21 chapter 17 on the manner of its application.[111]

The Guidelines presented the whole list of elements to be taken into consideration in order routinely to incorporate the precautionary approach into the decision-making process of the IMO:

1. anticipation and prevention of environmental problems arising from any regulatory activities of IMO and striving for continual improvement in all facets of those activities;
2. that solution to problems and consideration of new and existing policies, programmes, guidelines and regulations are developed in accordance with the precautionary approach;
3. that where action is necessary and options may involve uncertainty, all options are evaluated consistent with the precautionary approach;
4. adoption of cost effective practices and practical solutions to problems and promotion of their continued development;
5. where appropriate, that decision-making is preceded by environmental assessment and risk analysis to identify the environmental impacts of the proposed or alternative courses of action, whether these impacts can be prevented or minimised and how this might be done;

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[111] In particular, paras 17.21 and 17.22. These state:

'17.21 A precautionary and anticipatory rather than a reactive approach is necessary to prevent the degradation of the marine environment. This requires, inter alia, the adoption of precautionary measures, environmental impact assessments, clean production techniques, recycling, waste audits and minimisation, construction and/or improvement of sewage treatment facilities, quality management criteria for proper handling of hazardous substances, and a comprehensive approach to damaging impacts from air, land and water. Any management framework must include the improvement of coastal human settlements and the integrated management and development of coastal areas. 17.22. States, in accordance with the provisions of the United Nations Convention on the Law of the Sea on protection and preservation of the marine environment, commit themselves, in accordance with their policies, priorities and resources, to prevent, reduce and control degradation of the marine environment as to maintain its life-support and productive capacities. To this end, it is necessary to: (a) Apply preventive, precautionary and anticipatory approaches as to avoid degradation of the marine environment, as well as to reduce the risk of long-term or irreversible adverse effect upon it; (b) Ensure prior assessment of activities that may have significant adverse impacts upon the marine environment; (c) Integrate protection of the marine environment into relevant general environmental, social and economic development policies; (d) develop economic incentives, where appropriate, to apply clean technologies and other means consistent with the normalisation of environmental costs, such as polluter pays principle, so to avoid degradation of the marine environment; (e) Improve the living standards of coastal population in developing countries, as to contribute to reducing the degradation of coastal and marine environment'.

6. improvement in decision-making and management by obtaining and providing baseline and other data, identifying and explaining environmental changes;
7. promotion of national and international research, analysis and information programmes to identify, understand and disseminate information about threats to the environment from maritime operations, to contribute to defining the problems, including analysis of the degree of risk involved, by which uncertainties are reduced, and developing and testing solutions to problems;
8. consideration and adoption of economic incentives to encourage environmental responsibility as to conserve the marine environment and avoid further degradation;
9. support for development of new and existing policies, programmes, guidelines or regulations. Where appropriate, which contribute to the protection and enhancement of the marine and coastal environment consistent with IMO mandate;
10. that, as necessary and appropriate, IMO should, through programmes such as its Integrated Technical Co-operation Programme, assist countries to improve their capabilities in order to comply with IMO standards in the shortest possible time;
11. where existing practices fail to provide adequate environmental protection, encouragement of the development and use of cost-effective interim protective measures with feasible time frames, which include best environmental practice and best available technology;
12. promotion of clean technologies and waste minimization techniques from maritime activities, including the best environmental practice and best available technology to ensure improving environmental performance.

The Resolution also stresses that the precautionary approach should not be considered in isolation from other IMO practices, procedures and resolutions, including resolutions A.500[112] and A.777[113] and principles such a 'polluter pays' principle as reflected in Rio Declaration Principle 16. The document entitled 'Framework for Incorporation of the Precautionary Principle into the Programmes and Activities of IMO' outlines the management and decision-making framework to be followed in order to

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[112] The importance of this requirement is demonstrated in IMO Resolution A.5000 (XII) wherein the Assembly recommended to its Council that proposals for new conventions or amendments should only be entertained if there was 'a clear and well-documented demonstration of a compelling need'. This recommendation reflects the Assembly's concern that, in order to ensure the effective widespread implementation of IMO legal instruments, account has to be taken of the 'differences in available technical resources and in the processes of legislation amongst member States'.

[113] Resolution A.777 (18 Adopted on 4 November 1993) (Agenda item 27) on Work Methods and Organisation of Work in Committees and their Subsidiary Bodies.

promote the incorporation of preventive, precautionary and anticipatory approaches.[114]

In conclusion we may say that these are the main features of the precautionary approach of the IMO:

(i) the IMO supports the precautionary approach, not principle, which is in line with the formulation adopted by Principle 15 of the Rio Declaration;[115]
(ii) the precautionary approach has to be applied in case of uncertainty; however,
(iii) it has to be cost-effective;
(iv) environment impact assessment forms an indispensable part of the implementation of the precautionary approach;
(v) access to and dissemination of information should be promoted;
(vi) national and international research (such as risk analysis) must be conducted;

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[114] These are the guidelines:

'1. Consistent with resources and workload demand, the review and considerations should include environmental assessments an a systematic review of IMO's work (Review and consider environmental risks when prioritizing IMO's work); 2. In developing measures to prevent or reduce pollution, priority should be given to the use of cost-effective pollution prevention measures such as clean production, product substitution, and waste minimisation. Not engaging in pollution activities should be considered as an option when there are imminent threats of serious or irreversible damage (Evaluate feasibility of pollution prevention measures); 3. Where pollution prevention measured are not available, discharge standards or other cost-effective measures to protect the marine environment should be established, based upon the best available scientific information. This should include consideration of the results of any environmental assessments used in step (Where measures under (2) are not available, use best available information and science to set standards); 4. In developing environmental measures, consideration should also be given to the steps needed for their effective implementation. This might include enforcement provisions, verification procedures and techniques, achievable schedules and deadlines, and capacity building and technical co-operation programmes for developing countries (Identify implementation steps and procedures); 5. Where scientific uncertainties arise as to the sufficiency of standards, targets or the availability of appropriate technology, these uncertainties should be identified. The results should be used to be incorporated into an action plan used to encourage and promote, within IMO and the Member States, research to reduce or eliminate the uncertainties. The outcome of such research should then be used to review and improve the measures adopted and to establish, where appropriate, phase-in dates for improved technology (Promote research or gather more data to reduce uncertainties or improve technology); 6. Following development of measures, their effectiveness in protecting the environment and the extent to which they are actually implemented must be reviewed. If the measures do not prove effective or not being successfully implemented, then appropriate correcting measures should be undertaken (Assess the effectiveness of implementation).'

[115] On the debate on the precautionary approach and principle see above, pp. 35 et seq.

(vii) the conservation of the marine environment may be achieved through the adoption of economic incentives;
(viii) the IMO through various programmes will assist countries where necessary in improving their capabilities of achieving the IMO standards;
(ix) new practices will be introduced based on best environmental practice and the best available technology.

The above elements of the implementation of the precautionary approach follow the general concept of what constitutes the precautionary approach. The inherent vagueness of 'scientific uncertainty' and the risk of long-term or irreversible adverse effects on the environment are counterbalanced by the presence of the environmental impact assessment, the duty to inform and the use of the best available technology and best environmental practice (or the 'BATBEP'), which are the most tangible constituents of the approach.

Therefore, the next step is going to be the investigation and legal analysis of the relevant provisions contained in the IMO selected instruments and the analysis of the extent to which the obligations contain therein embrace this principle.

The Fourth Meeting of the Open-Ended Consultative Process on Oceans and the Law resulted in several interesting postulates which further evidence the unclear character of the precautionary principle, as well as the fact that in the practice of States the application of this principle competes with other principles and with cost effectiveness. First, mention must be made that the attitude adopted by this Meeting to the precautionary approach in relation to all activities which relate to the marine environment (therefore also to those covered by MARPOL) is, in principle, guided by the idea of its general, universal application based on the link between the safety of navigation and the protection of vulnerable marine ecosystems.[116] Therefore the preferred approach is a holistic one, i.e. the overall application of a precautionary approach in an integrated manner to all activities and all ships without exceptions.

However, interventions by States (even very environmentally minded ones such as Norway) at the Meeting clearly indicate that their understanding of the role of the precautionary principle was not in line with this approach or with its extensive formulation in the 1995 Guidelines. The discussion was focused on general applicability of the precautionary

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[116] A. Bisiaux et al., 'Highlights from the Fourth Meeting of the Consultative Process', 25 *Earth Negotiations Bulletin No. 4*, 5 June 2003, available online at: www.iisd.ca/vol25/enb2504e.html.

principle within the framework of shipping and environmental protection. For example, Norway's intervention was interesting as it observed that UNCLOS does not envisage environmental precautionary measures in relation to ships which meet international standards. The issue of the application of the precautionary approach has proved to be very contentious. New Zealand expressed its concern already over the diversion of single hull tankers to other than European waters as a consequence of the measures adopted by the EU following the *Prestige* disaster which were not even precautionary but preventive in nature. That State emphasized also that the adoption of the precautionary approach was likely to raise inspection costs. Some States (such as the Russian Federation) very strongly opposed any regional and unilateral measures which impeded commercial navigation. Therefore, it may be presumed that some precautionary measures, even regional, which impact on world navigation were not fully approved of. China stressed the importance of freedom of navigation and environmental protection and sought a solution in the proper balancing of both within the structure of international law. As evidenced by the above debates, certain States appeared to oppose the introduction of stricter measures in line with the precautionary or even at times preventive principles (as discussed below).

(c) Vessel Oil Spill Prevention[117] *under MARPOL 73/78 and other IMO Conventions*

In this part of the Chapter, it will be argued that the means that the IMO has adopted to prevent oil spills are preventive, not precautionary, in nature; also that even these means are not fully successful in preventing oil pollution as they are not fully complied with. Therefore, compliance with more far reaching precautionary measures could prove to be even more problematic.

Likewise, it will be shown that the vessel oil pollution regulation under MARPOL 73/78 often fails to fulfil the requirements not just of the precautionary principle, but also of the principle of prevention. The industry and the IMO devote much time and effort to introducing prevention as regards oil spills. International Oil Spill Conferences are annual events, and there are workshops following these events. For example, in 2004 the Prevention Workshop on 'Prevention, what are the next challenges' was organized at

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[117] S.A. Lentz and F. Felleman, 'Oil Spill Prevention: A Proactive Approach', International Oil Spill Conference (the 'IOSC') (2003), available online at http://www.iosc.org/docs/IssuePaper1.pdf.

the IMO in London.[118] It should be very strongly stressed that despite the adoption of the precautionary approach Guidelines, the IMO generally and the MARPOL 73/78 specifically are concerned with prevention, but not precaution, regarding oil spills (see below).

As explained, vessel source input (how much oil is discharged to the sea based on the source of the vessel) could be categorized in the following manner: tankers; barges; non-tankers; recreational vessels; fishing vessels; and passenger vessels. There are two main categories of inputs: accidental spills which originate e.g. from collisions, and operational discharges, such as e.g. oil contained in ballast water and oil discharged in bilge water. Lentz and Felleman observed: '[r]ecent evidence indicates widespread by-passing of oil/water separators, in direct contravention of MARPOL operational discharges limitations.'[119] Therefore it appears that the adoption of the precautionary approach by the IMO has not been very successful, because, as evidenced by several examples below, even the standard preventive measures are not followed. The same authors noted that the volume of operational spills had been underestimated on the assumption that the reduction in spills was the result of compliance with international regulations.[120]

There have also been instances of false waste oil disposal statements in ships' record books, to the effect that waste oil was being incinerated on board, whilst in reality it was being discharged into the Pacific Ocean via a secret bypass hose. Other research indicates that certain shippers may be intentionally modifying oil/water separators in order to discharge illegal quantities of oil into the sea. In Canada, it is estimated that between 60,000 and 100,000 birds are killed annually on the South Coast of Newfoundland as a result of illegal oil pollution. Europe is also an area where such incidents take place. In the 'special areas' designated under MARPOL, such as the Baltic Sea, over 800 illegal spills were detected in 1998 and more than 1,100 in 1997, which indicates that 'non-compliance runs rampant in this heavily monitored area, and calls in question OIS assumptions'.[121] Another factor which contributes to this unsatisfactory state of affairs is the absence of adequate reception facilities, even in States which are parties

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[118] Prevention Workshop, 'Prevention: What are the next Challenges?', available online at: http://pims.ed.ornl.gov/2005_IOSC_workshop_final_report.pdf.

[119] Lentz/Felleman, *supra* note 117, at 3. The same source indicates that non-tank accidental spills (100 gross tonnes per year and above) discharge an average of 7100 tonnes of oil per year worldwide in the marine environment. They also contribute to at least 270,000 tonnes in operational discharges (machinery space bilge oil, fuel oil sludge, and oily ballast are the sources of operational discharges from non-tank vessels).

[120] *Ibid.*, at 6.

[121] *Ibid.* All data come from the same source.

to MARPOL Annex 1, which requires them. Accidental discharges from non-tank vessels are mostly related to non-compliance with MARPOL discharge regulations, an area which is not sufficiently researched, as well as the provision of stricter monitoring and enforcement policies.[122]

There are several measures, apart from spill response capability, which, according to experts, 'purport to address prevention', but do not involve the principle of precaution.[123] These are as follows: double-hull requirements; vessel management requirements (e.g., International Safety Management (ISM Code); vessel crew licensing certification and training requirements (e.g., development of Standards of Training, Certification and Watchkeeping (STCW); and Port State control inspections. All these instruments are in fact based on the adoption of preventive, rather than precautionary, measures. It is unquestionable that double hulls are effective in spill control. Prevention of oil spills is closely related to ship design; however, there is a whole host of issues concerning design which have not yet been incorporated into spill prevention.[124] As mentioned above, the ISM Code also has an important preventive function, as it applies to all passenger vessels, oil tankers; chemical tankers, gas carriers, bulk carriers and high speed craft of 500 gross tonnes or more on an inter-national level.[125] However:

> the jury is still out on the efficacy of the ISM Code. The structure of the Code has the real potential to be little more than a paper exercise. Its effectiveness relies heavily on the commitment of ship managers to diligently carry out its implementation. To date there has been no systematic evaluation of the level of such commitment by which to judge its effectiveness.[126]

The new 2002 (amended) International Convention on Standards of Training, Certification and Watchkeeping for Seafarers is too recent for one to be able to assess its effectiveness, and the validity of standards which were applied by the IMO in awarding 'white list' status but which were, anyhow, questioned by some industries. [127] This Convention is based on

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122 *Ibid*., at 7.

123 *Ibid*., at 9.

124 Lenz and Fellemann mention requirements for redundancy, alarm and automatic changeover for steering gear in the event of a single failure; an increased powering requirement; a requirement for emergency or redundant propulsion; improved longitudinal bending movements; restricted use of high tensile steel for internal structures; and a requirement for inherent positive stability throughout cargo and ballast handling: *ibid*., at 9.

125 *Ibid.* The ISM Code was effective as of July 1998.

126 *Ibid*., at 10.

127 *Ibid*. The 'White List' is compiled by the IMO and contains the register of compliant countries from which it recruits crews and officers.

standards which are fully established and not precautionary. Port State control and flag State accountability are also not very effective means of oil spill prevention, due first to the failure of some States to comply with internationally agreed standards and, secondly, to the absence of any serious consequences in cases of such failure.[128] Salvage as a preventive, again not as a precautionary, measure is, according to the same authors, not very encouraging. Despite the existence of international instruments to this effect, such as the 1989 International Salvage Convention and other schemes, e.g., SCOPIC (Special Compensation P&I Clause):

> the economic viability of the salvage industry has been challenged over the past few decades as improvements to ship safety have reduced the overall number of major casualties. As a result, the salvage industry is also faced with a decline in the numbers of trained and *experienced* personnel available to undertake complex salvage operations.[129]

However when catastrophe occurs, '[e]nvironmental consequences can be devastating'.[130] The polluter-pays principle 'creates little more than a "paper tiger," providing minimal salvage capability and readiness'.[131] Salvage as a tool in the prevention of pollution also means the establishment of an efficient system of wreck removal. Finally the authors of this excellent essay mention the additional factors which are beneficial in the prevention of oil spills: the creation of 'safe heavens' or 'ports of refuge'; the prevention of operational discharges. Voluntary industry initiatives to reduce the number of spills, although quite effective in many ways, are not pursued by companies which could most benefit from them as:

> the owners and operators of sub-standard ships are not likely to invest in voluntary efforts to improve performance beyond that which is required by regulation. For these organisations, regulatory mandates are necessary.[132]

Finally, there are two more factors which are important for the prevention of oil spills: the human element and the responsibility of the charterer. The first of these involves additional economic costs (e.g., training) which may clash with short-term interests of shareholders; as to the second, there is little incentive to encourage the high standard of shipping in the current structure of marine petroleum transport, the major problem being the

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128 *Ibid.*, at 9–11.
129 *Ibid.*, at 12.
130 *Ibid.*
131 *Ibid.*, at 13.
132 *Ibid.*, at 15.

absence of the responsibility of the charterer, which could be solved by shared liability between shipper and charterer in order to achieve the highest standard of shipping.[133]

There is also a cluster of other factors which are repeatedly mentioned by many authors as necessary in oil spill prevention. For example, the lessons learned from past incidents are a very important part of the whole prevention process, as they lead to the designing of new, more efficient procedures and the improvement of existing ones. Of the greatest importance is effective statutory reporting, which is indispensable for the achievement of transparency, without which the avoidance of oil spills is impossible. Such reports are best gathered and analysed by governments with the cooperation of industry.[134] Notwithstanding many improvements, there are a great number of incidents caused by many various factors: human factors; mechanical failure; management systems/procedural weakness; regulatory weakness; and security, which in general are a lack of prevention, not precaution, as incidents are a result of not following the conventional rules.[135] The ways to improve the existing situation depend on the division of rules and responsibilities between industry and government. First, to achieve prevention responsibility must be shared. The primary responsibility for enforcement belongs to governments. Prevention cannot be achieved in the absence of funding and resourcing. Mention must also be made of the improvement of communication with the public and media. Very importantly, international regulations must be followed.[136] These should be an improvement on those currently existing in MARPOL 73/78 and the OPRC Convention, and to this effect the development of Global Environmental Standards is recommended.[137] Risk management is a complicated issue as it is linked to costs. The normal practice is to balance risk management and the expenses involved. Often it is decided that no further

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[133] *Ibid.*

[134] See Figure 2, 'Prevention and Response', in the Workshop on Prevention, *supra* note 118, at 5.

[135] *Ibid.*, at 6. The Workshop came up with the following key points:

Key points to History and Learning from the Past:
- Need for more attention to Human Factors and Culture.
- Need for management system guidance for newcomers and new facilities in an organisation.
- Need for better knowledge transfer and use of Corporate Memory.
- Need for improvement of reporting of Near Misses and Hazardous Conditions.
- Lessens Learned from oil spills should be better applied to prevent future spills.
- Need for openness in reporting and discussing incidents.

[136] *Ibid.*, at 8.

[137] *Ibid.*, at 9.

expenditure should be involved if it leads to disproportionate costs and no marked risk improvement. 'In many real business circumstances, the expenditures can only be justified on a cost effectiveness basis'.[138] Such an approach further indicates the reluctance of stakeholders to assume the greater costs that would be incurred by reliance on the precautionary approach. The other factors also mentioned are security (the IMO has introduced the International Ship and Port Facility Security Code) and the management of natural disasters and education, which should be a joint effort by, *inter alia,* the IMO, oil industry and coastguards.[139]

The oil pollution problem is at present one of the major projects funded by the European Union entitled: 'Pollution Prevention and Control-Safe Transportation of Hazardous Goods by Tankers'.[140] This project's aim is:

> to deliver a framework and suitable tools for a methodological assessment of risk to be undertaken to provide a rational basis for making decisions pertaining [to] the design, operation and regulation of oil tankers . . . The project brings together prime protagonists from the area of maritime safety in Europe.[141]

However, as practice shows, even these well established preventive (not precautionary) means fail as oil spills still occur and often they are the direct cause of the new regulations or amendments by the IMO concerning MARPOL 73/78. For example, after the *Exxon Valdez* accident MARPOL was amended to the effect that it was obligatory for new and existing tankers of 5,000 DWT and more after 6 July 1993 to be fitted with double hulls, or an alternative design approved by the IMO. The *Erika* accident resulted in a new, stricter timetable for phasing out single-hull tankers, and the principal phasing-out date was the year 2015. The 2002 *Prestige* incident prompted EU Regulation 1726/2002[142] to introduce a new, stricter set of timelines for the phasing-out of single-hull tankers. The IMO followed by the adoption by the MEPC on 4 December 2003 of a revised Regulation 13 G,[143] and in addition the new Regulation 13 H of Annex 1 to MARPOL

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138 *Ibid.* In the UK, the process of balancing of expenditures and no marked risk minimization is called reducing the risk to a level As Low as Reasonably Practicable ('ALARP').

139 *Ibid.*, at 10–11.

140 S. Aksu et al., 'A Risk-Based Design Methodology for Pollution Prevention and Control', available online at: http://www.pop-c.org/news/documents/RINA%20paper%20 2003.pdf (last visited on 10 July 2008).

141 *Ibid.*, at 1.

142 OJL 249, 1 October 2003.

143 Both Regulations entered into force on 5 April 2005. Regulation 13G concerns the prevention of oil pollution from tankers carrying heavy grade oil (the 'HGO'). HGO means any of the following: crude oils having a density at 15 degrees Celsius higher than 900 kg/m3;

73/78 setting the final phasing-out date for Category 1 tankers, which predate MARPOL, was brought forward to 2005 from 2007. Category 2 and 3 tankers are scheduled to be phased out in 2010 (brought forward from 2015).

National communications concerning certain aspects of the implementation of Regulations 13G and 13H evidence the lack of uniformity, mostly regarding the national incorporation of the timetable for phasing out of certain tankers, such as those below 5000 DTW.[144] These Regulations grant the possibility of exemptions. For example several States, such as Japan, give 'favourable consideration' to the several exemptions regarding the operation of their oil tankers after the phase-out date.[145]

Under the regime implemented by the European Union and the States of the European Economic Area, somewhat stricter measures were adopted.[146] Other States such as China also followed a stricter regime in their

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fuel oils having either a density at 15 degrees Celsius higher than 900 kg/m^3 kinematic viscosity at 50 degrees higher than 180 mm 2/s (cSt); bitumen, tar and their emulsions. This Regulation bans the carriage of HGO in single-hull tankers of 5000 tones DWT and above after the date of entry into force of the Regulation (5 April 2005) and in single-hull oil tankers of 600 DWT and above but less than 5000 tons DWT, not later than the anniversary of their delivery date in 2008. In the case of certain category 2 and 3 tankers carrying HGO cargo, fitted only with double bottoms or double sides, not used for the carriage of oil and extending to the entire cargo tank length, to tankers fitted with double hull spaces not meeting the minimum distance protection requirements, which are not used for the carriage of oil and extend to the whole cargo tank length, the Flag State, under certain conditions, may not ban the operation of such ships beyond 5 April 2005 until the date on which they reach 25 years of age calculated from the date of their delivery. The Flag State may exempt an oil tanker of 600 DWT and above carrying HGO if the ship's route is exclusively within the area under the party's jurisdiction or under the jurisdiction of another party, provided that the party under whose jurisdiction the ship will be operating agrees. A party to MARPOL 73/78 can deny the entry of single-hull tankers carrying HGO which have been allowed to operate under the exemptions into ports or offshore terminals under its jurisdiction, or prohibit ship-to-ship transfer of HGO in areas under its jurisdiction except when it is necessary for the safety of the ship or the saving of lives at sea. All information is available online at: http://www.imo.org/Safety/mainframe.asp?topic_id=1043.

[144] All information is available online at: http://www.imoorg/Safety/mainframe.asp?topic_id=1046.

[145] These tankers are allowed to continue operation after the phase out date, providing that have double sides and bottoms (Regulation 13G (5), and according to Regulation 13G (7), complied with CAS Requirement, but no later than 25 years from the date of delivery or 2015, whichever was earlier. The same 'favourable consideration' applies to Japanese flagged oil tankers having on board a heavy grade oil to continue operation beyond 8 April 2005, providing that the vessel is in compliance with conditions described in Regulations 13(G) and 13 (H), but no later than 2015. Japanese oil tankers below 5000 DWT may be allowed under Regulation 13(6)(a) after 5 April 2005.

[146] As far as the implementation of Regulation 13G is concerned the EU members will follow the scheme set out in Regulation 13H, with the following exceptions:

implementation of Regulations.[147] The United States sent a reply that these Regulations would not apply since the express approval of the US Government would be necessary before both Regulations could enter into force. The communication read, *inter alia*, as follows:

> Since the US is not a party to the aforementioned regulations, the U.S. Coastal Guard cannot enforce its provisions or compel U.S. vessels owners to comply. Further, because of our official reservation status our national law does not recognise the amended MARPOL regulations, and the U.S. is not obliged to record MARPOL phase-out dates on the Form B Supplement of International Oil Pollution Prevention (IOPP) Certificates.[148]

Moreover, US law does not require vessels to meet the requirements of the Condition Assessment Scheme (CAS).[149]

- after 2015, there will be no single-hull tankers calling at EU ports or offshore terminals under EU States' jurisdiction, including category 2 and 3 tankers complying with Regulation 13(G), i.e. double bottomed or double-sided tankers;
- after 2010, any single single-hull tanker which may be granted a phase-out extension date under its Flag State (Regulation 13(G)(7)) will be banned from entry into EU ports or offshore terminals under these States' jurisdiction.

From April 2005, the EU States banned all single-hull oil tankers carrying heavy oils, including tankers which are given permission for such trade by their flag State, according to Regulation 13(H)(5).

[147] As far as oil tankers flying the flag of China are concerned, double-sided and double-bottomed tankers will be allowed to continue to trade until their 25th anniversary, but no later than 2015 (Regulation 13G(5)). Chinese single-bottomed and single-sided tankers will be prohibited from trading beyond their phase-out date (Regulation G(7)). Singe-bottomed and singe-sided tankers will not be permitted to trade beyond their phase-out date (Regulation 13G(7)). Chinese single-bottomed tankers and single-sided tankers will not be allowed to transport heavy grade oil or crude oil with densities over 900Kg/m^3 beyond their phase-out date, according to Regulation 14(G)(4), notwithstanding any extension granted by the flag State. As of 5 April 2005, foreign flag single-hull tankers transporting heavy grade oil are not allowed in the ports of China, with the exception of single-sided or double-bottomed tankers which are less than 20 years old. See http://imo.org/includes/blast/DataOnly.asp/data_id%3D11763/440.pdf.

[148] See http://www.imo.org/includes/blastDataOnly.asp/date_id%3D11485/430.pdf (last visited on 10 July 2008).

[149] The Communication asserted that:

> 'in the spirit of international cooperation, the Coastal Guard will continue to record MARPOL single hull phase-out dates on the Form B Supplement of IOPP Certificates for other vessels sailing internationally. Moreover, while no CAS provisions exist in the U.S. law, we encourage U.S. vessels operators to voluntarily comply with CAS as needed. We established a voluntary program to meet this need and will issue a Statement of Voluntary Compliance to vessels that fully comply with Resolution MEPC. 94(46). We are developing a directive which outlines this policy . . . .'

Available online at: http://www.imo.org/includes/blastDataOnly.asp/data_id%3D11485/430.pdf.

Considering the divergent schedule of implementation of Regulations 13G and 13H (or, as in the case of the United States, their non-implementation) and permissible multiple exemptions, it may be asked what is the content of the rule contained in Regulations 13G and 13H. First of all, as observed above, both Regulations were the result of serious accidents (the *Erika* and the *Prestige*), therefore, its enactment was reactive not proactive, or anticipatory and with full knowledge of all scientific facts. Therefore, these Regulations were preventive at best, as they were long overdue, since the dangers of the use of single-hull tankers were well known for a considerable period of time. A wrong conclusion would be reached therefore in the assertion that the adoption of Regulations 13H and 13G was the reflection of the application of the precautionary principle of the IMO in practice. It was a necessary measure, the adoption of which was prompted by accidents rather than being a result of rational or precautionary policy. It must be noted that it is well acknowledged legislative practice within the IMO that stricter regulatory measures follow accidents. Such legislative practice is not in accordance with the gist of the precautionary principle.

The application of merely preventive measures is riddled with difficulties and in urgent need of improvement. Although the IMO in 1995 adopted the Resolution on the application of the precautionary approach, it appears in light of the current practice of this organization that it has not yet been applied. There is still a lot to be done in order to adopt fully merely preventive principles, starting with the basic requirements of the compilation of relevant data, which are often sketchy or incorrect. Other fundamental elements of prevention are also neglected: design, safety, education, the training of seafarers, the lack of adequate domestic regulatory schemes, only partially implemented international rules, etc.; in short, all the areas which provide basic prevention against oil pollution. Application of the precautionary approach (principle) is a task in the implementation of which a multitude of actors are involved: the IMO, tanker owners, operators and the oil industry. Therefore, the IMO's best intentions and efforts in following the precautionary principle depend on concerted and coordinated action by all involved and interested actors: a truly daunting task. Lastly, the precautionary principle is a proactive one, i.e. action is required before even full scientific evidence is available. Oil pollution is very much based on a reactive approach, as evidenced by the double-hull regulations. It requires the occurrence of many serious accidents to introduce new, stricter regulations, since economic factors and cost-effectiveness certainly play a pivotal role. The adoption of any measures is the result of the balancing of interests test and, as it stands at present, the nexus of existing (often contradictory) interests and a multitude of actors makes

it very problematic to apply the precautionary principle at this stage of cooperation, especially in the view that the implementation of preventative measures causes problems. It may be added that the prevention of oil pollution is one of the best-established areas of the protection of the marine environment. Therefore, if the adoption of the precautionary principle is met with difficulties there, it may be even more far fetched in other less regulated areas of marine protection.

3. Dumping at Sea

(a) A Short Description of the London Convention and the 1996 Protocol

This section will mainly analyse the provisions and practice of the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (the 'London Convention')[150] and the 1996 Protocol[151] from the point of view of the implementation of the precautionary principle.[152]

The London Convention is a global convention.[153] It defines dumping as the deliberate disposal at sea of waste or other matter from vessels, aircraft, platforms or other man-made structures, as well as deliberate disposal of these vessels or platforms themselves.

The Convention in general regulates the international control and prevention of marine pollution. It prohibits the dumping of certain hazardous materials unless as the result of prior and general special permits. Special permits relate to the dumping of certain other specified groups of hazardous materials and a general permit is required for other waste or matter. The general definition of dumping does not, however, include the exploration and exploitation of seabed mineral resources. The London Convention adopted a classical approach to dumping at sea, i.e. the introduction of the so-called black and grey lists. The black list enumerates substances the dumping of which is prohibited; and the grey list substances the dumping of which is permitted only under strict control and certain conditions.

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[150] O.S. Stokke, 'Beyond Dumping? The Effectiveness of the London Convention', *Yearbook of International Co-operation on Environmental and Development* (1998/99) 39, at 39–49.

[151] Entered into force on 24 March 2006. So far 30 States are Parties to the Protocol. See on the Protocol R. Coenen, 'Dumping of wastes at Sea: Adoption of the 1966 Protocol to the London Convention 1972', 6 *RECIEL* (1997) 54, at 54–61.

[152] Information on this Convention may be obtained on the website: http://www.londonconvention.org/main.htm (last visited on 10 July 2008). The Convention entered into force on 30 August 1975.

[153] As of 30 June 2005, there are 81 parties, which constitute 69.85% of the world tonnage: http://www.imo.org/Conventions/mainframe.asp?topic_id=247 (last visited on 10 July 2008).

The Convention is not applicable in relation to the securing of human life or saving of vessels in the event of *force majeur.* The Convention promotes international cooperation in the field of monitoring and scientific research. It has Annexes appended to it, which list prohibited wastes and other waste for which a special permit is necessary. The criteria concerning the issue of such permits are the subject of the third Annex, which also deals with the nature of wastes, the characteristics of a dumping site and the method of disposal.[154]

The 1996 Protocol is intended to replace the London Convention. States can be parties to the 1972 Convention or to the Protocol or to both. The 1996 Protocol is much more restrictive than the 1972 London Convention and adopted very innovative regulatory techniques in relation to dumping at sea.

The 1972 Convention permits dumping to be carried out, provided certain conditions are met. The 1966 Protocol in principle prohibits all dumping and therefore applies so-called reverse listing, i.e. all dumping is prohibited (unless certain exceptions apply). Article 4 states that Contracting Parties 'shall prohibit the dumping of any wastes or other matter with the exception of those listed in Annex 1'.[155]

(b) The Precautionary Principle in 1972 London Convention and the 1996 Protocol

The London Convention was signed in 1972 – therefore the idea of the precautionary principle had not yet entered the realm of international

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[154] All information was obtained from: http://www.imo.org/Conventions/contents.asp?topic_id=268&doc_id=681 (last visited on 10 July 2008). The Convention was amended several times: the 1978 amendments (entry into force 1979) on incineration of wastes and other matter at sea; the 1978 amendments on a new procedure for the settlements of disputes; 1980 amendments (entry into force 1981) giving a list of substances which require special care while incinerated; the 1993 amendments (entry into force 1994), which banned the dumping at sea of low-grade radioactive wastes, as well as phasing out the dumping of industrial wastes by 31 December 1995, banning the incineration at sea of industrial wastes. In 1983, the parties to the London Convention adopted a Resolution to impose a moratorium on the dumping at sea of low-grade radioactive waste. Further Resolutions called for the phasing out of industrial waste dumping and the banning of the incineration at sea of noxious liquid substances.

[155] These are: 1. Dredged material; 2. Sewage sludge; 3. Fish waste, or material resulting from industrial fish processing operations; 4. Vessels and platforms or other man-made structures at sea; 5. Inert, inorganic geological material; 6. Organic material of natural origin; 7. Bulky items primarily comprising iron, steel, concrete and similar unharmful materials for which the concern is physical impact and limited to those circumstances where such waste is generated at locations, such as small islands with isolated communities, having no practical access to disposal options other than dumping. The only exceptions to this are contained in Article 8, which permits dumping to be carried out 'in cases of *force majeure* caused by stress of weather, or in any case which constitutes a danger to human life or a real threat to vessels'. Incineration of waste at sea was permitted under the 1972 Convention, but was later prohibited under amendments adopted in 1993. It is specifically prohibited by Article 5 of the 1996 Protocol.

environmental law. However, in the spirit of the growing interest in the protection of the environment, the parties to the London Convention in 1991 adopted Resolution 44/14 on the precautionary principle.[156]

One of the most fundamental changes introduced by the 1996 Protocol, as compared to the 1972 Convention, was the incorporation into the text of the Protocol (Article 3) of the precautionary approach.[157] It must be noted that the Preambular provisions of the Protocol read as follows:

> Noting in this regard the achievements within the framework Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 and especially the evolution towards approaches based on precaution and prevention . . .

The formulation of the precautionary approach in the 1991 Resolution is fairly classical, i.e., it emphasizes the 'lack of conclusive evidence' and not fully proved 'causal link'. Furthermore, the Resolution encourages the implementation of clean production technology and the development of scientific research. It is noteworthy that the Resolution recommends both the adoption of the precautionary approach and the taking of preventive measures. Therefore the strict division between them is not maintained.

The Scientific Group at its twenty-second meeting, which was held in 1999, acknowledged the importance of applying the precautionary

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[156] 'Agrees that in implementing the London Dumping Convention the Contracting Parties shall be guided by a precautionary approach to environmental protection whereby appropriate preventive measures are taken when there is reason to believe that substances or energy introduced in the marine environment are likely to cause harm when there is no conclusive evidence to prove a causal relation between inputs and their effects; Agrees further that Contracting Parties shall take all necessary steps to ensure the effective implementation of the precautionary approach to environmental protection and to this end they shall (a) encourage prevention of pollution at source, by application of clean production methods, including raw materials selection, product substitution and clean production technology and processes and waste minimisation throughout society; evaluation the environmental and economic consequences of alternative methods of waste management, including long-term consequences; (c) encourage and use as fully as possible scientific and socio-economic research in order to achieve an improved understanding on which to base long-range policy options; (d) endeavour to reduce risk and scientific uncertainty relating to proposed disposal operations; and (e) continue to take measures to ensure that potential adverse effects of any dumping are minimised, and that adequate monitoring is provided for early detection and mitigated of these impacts'.

[157] Article 3 (1):

> '[i]n implementing this Protocol, Contracting Parties shall apply a precautionary approach to environmental protection, from dumping of wastes or other matter whereby appropriate preventative measures are taken when there is a reason to believe that wastes or other matter introduced into marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation inputs and their effects.'

approach when implementing the London Convention. In this context, risk assessment procedures were kept under review. However, as the Scientific Committee later observed at its twenty-seventh meeting, no documents were submitted under this item. Delegations were invited to submit their experiences to the twenty-eighth meeting of the Scientific Group.[158]

The next step is to analyse the practice in relation to the precautionary approach (principle) in certain areas of dumping at sea.[159] One of the best examples of this is to be found in the prohibition on the dumping of radioactive waste, which is the standard example of the application of the precautionary principle. However, as will be shown, other factors also to a certain degree played a role in the adoption of the Moratorium on all radioactive dumping.[160] This prohibition under the London Convention has had a very turbulent history, and even if it is assumed that the total ban on radioactive dumping is an example of the application of the precautionary approach, its enacting was very divisive and clearly indicated that there were a number of different approaches among States to the necessity of producing full scientific evidence in order to form a basis for the making of any amendment to London Convention.[161] A moratorium on all radioactive waste was adopted in 1983. However, Great Britain

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[158] IMO, Scientific Group Meeting, 2–7 May 2004, Agenda Item 15, LC/SG/27/15, 2 July 2004.

[159] For the practice see the excellent IMO website: http://www.londonconvention.org/main.htm (last visited on 10 July 2008). See also an ONA Project conducted by the Law of the Sea Institute, at Berkeley, Boalt Hall, University of California at Berkeley, on 'Oceans in the Nuclear Age Project' (the 'ONA' Project), one of the parts of which is Dumping and Loss of Nuclear Material: http://www.law.berkeley.edu/centers/ilr/ona/pages/dumping.htm.

[160] See in depth L. Ringius, *Radioactive Waste Disposal at Sea: Public Idea, Transnational Policy Entrepreneurs, and Environmental Regimes* (2001). For a different view, see Trouborst II, *supra,* note 2, at 206.

[161] It must be noted that, as a matter of a general policy, the decisions adopted within the framework of the London Convention are based on a sound system with three strands of scientific advice having been elaborated under the Convention. Thus:

- The broadest advisory mechanism is the Scientific Group on Dumping, comprising experts nominated by the Contracting Parties, which evaluates and reviews existing provisions and annexes in the light of new scientific information.
- Secondly, a range of *ad hoc* groups, such as the Group of Legal Experts on Dumping, the Group of Experts on the Annexes, the Working Group on Dredged Materials Disposal, the Working Group on Incineration at Sea, the Task Team on Liability and the Panels on Sea Disposal of Radioactive Waste, have been set up to compile information and advise the Consultative Meetings on especially vital or controversial matters.
- Thirdly, external organizations, such as the International Atomic Energy Agency (IAEA), provide advice at the request of the Consultative Meetings on dumping of radioactive material.

staunchly supported the necessity for full scientific evidence of adverse health effects and damage to the environment.[162] It may be argued that as early as 1980 the precautionary approach was in the course of being conceptualized, so that it did not figure in the discussion preceding the moratorium. Charles D.G. Hollister of the World Hole Oceanographic Institute, which is one of the most important marine research centres, concluded that a sound scientific evaluation was necessary before the introduction of any amendments to the London Convention.[163] In fact the British policy was reversed, mostly due to mounting international pressure. The policy of the government of the Netherlands was noteworthy. The statement of the Netherlands Ministry of Public Health was as follows: '[t]his ministry is convinced that ocean dumping is a safe disposal for wastes, but it is clear that our society does not want ocean-dumping'.[164] Therefore, in some cases adherence to the moratorium was based rather on policy considerations than the application of the precautionary principle.

The period after the imposition of the moratorium was also characterized by very heated discussions between States which supported the ban on the basis of the precautionary principle and States which suggested that there were no scientific or technical grounds to be found to prohibit the dumping at sea of all radioactive wastes, providing this dumping followed all internationally agreed procedures and controls. The period leading to the adoption of the ban was characterized by the polarization of views of States and, although in the end the ban was based on the precautionary principle, there were still States, such as Great Britain, which traditionally adhered to the regulation based on the assimilative capacity of the oceans. As Ringius observes the scientific debate on radioactive waste disposal also revolved to a significant degree of discussion around the concept of assimilative capacity.[165]

In 1993, the Parties agreed to amend Annexes I and II to the London Convention to ban the dumping of all radioactive wastes.[166] The precautionary approach was not the only reason for this ban, however, but also:

> The UK recognises that the weight of international opinion on this matter means that such dumping is not, in any event, a practical proposition. We have, therefore, decided to accept the ban.

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162 *Supra*, note 165, at 140.
163 *Ibid.*
164 *Ibid.*, at 137.
165 *Ibid.*, at 149.
166 Resolution LC.51 (16), which entered into force in 1994.

as the UK Minister of Agriculture explained. Public opinion was also instrumental in the Belgian government's acceptance of the ban and the reversal by the French government of its pro-dumping policy and the decision to adopt the radioactive waste disposal ban. [167]

Ringius makes a very interesting assessment of the role public opinion played in the regulation of the disposal of nuclear wastes by dumping at sea. He notes as follows:

> The public, political leaders and ENGOs perceive radioactive waste and other aspects of nuclear technology most negatively. What does it mean for the 'generalizability' of the findings? It means that some caution is called for. It should be expected that policy entrepreneurs could easily persuade the public that ocean disposal of radwaste is a horrid anti-environmental activity. Because international public opinion is likely to perceive radwaste disposal negatively, mobilising domestic and international antidumping sentiments would be reasonably straightforward for an influential ENGO. But it would be very hard to convince the general public that the sea disposal is an environmentally neutral and safe, and perhaps even an environmentally preferable, disposal option for this radioactive waste.[168]

The application of the precautionary principle in the 1996 London Protocol was also the subject of some degree of controversy. On 2 November 2006, at the First Meeting of the Contracting Parties to the Protocol, an amendment to Annex I was adopted so as to include 'carbon dioxide streams from carbon dioxide capture processes for sequestration'.[169] It was suggested that such amendments required a basis of full scientific knowledge and might prove to be harmful if based only on the precautionary principle. These streams may only be considered for dumping if (1) disposal is into a sub-sea bed geological formation; (2) they consist mostly of carbon dioxide as they may contain incidental substances deriving from the source material and the capture and sequestration process used; and (3) no wastes or other matter are added for the purpose of disposing of those wastes of other matter.

Despite the views of Purdy and Macrory that '[d]isposing of CO_2 in sub-sea bed storage could bring into play the precautionary principle',[170]

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[167] All information is derived from Ringius, *supra* note 170, at 152.

[168] *Ibid.*, at 181–182.

[169] IMO Briefing 43/2006 (8 November 2006).LC-LP.1/Circ.5 (27 November 2006). Notification of amendments to Annex 1 to the London Protocol 1996, in force as of 10 February 2007. LC-LP.1/Cic.11 (16 February 2007), Notification of entry into force of amendments to Annex 1 to the London Protocol.

[170] R. Purdy and R. Macrory, 'Geological carbon Sequestration: Critical Legal Issues', *Tyndall Centre Working Papers*, No. 45, at 24 (2004).

as the latest developments indicate, however, this method of disposing of CO_2 may not be advisable without full scientific knowledge, thus rendering the whole purpose of the application of the precautionary principle doubtful.

The Scientific Group of the London Protocol was requested to develop specific guidance on the application of Protocol Annex 2 to geological sequestration, with a view to its adoption at the Second Meeting of the Contracting Parties in November 2007. Until then, Parties are to use the best available guidance.[171]

The Scientific Groups under the London Convention and the Protocol expressed concerns, however, as to the effect of the large-scale fertilization of the oceans to sequester carbon dioxide. The Group made the following statement:

> The Scientific Groups discussed several submissions relating to iron fertilization of the oceans to sequester CO_2, as part of their agenda, and issued the following statement as a result of the meeting in June 2007: Large-scale fertilization of ocean waters using micro-nutrients such as iron to stimulate phytoplankton growth in order to sequester carbon dioxide is the subject of recent commercial interest. The Scientific Groups of the London Convention and the London Protocol take the view that knowledge about the effectiveness and potential environmental impacts of ocean iron fertilization currently is insufficient to justify large-scale operations.[172]

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[171] IMO Briefing 43/2006 (8 November 2006).

[172] See the meeting of the Scientific Groups to the Contracting Parties under the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (London Convention) and the 1996 Protocol thereto (London Protocol): 30th session – 18–22 June 2007:

> 'Scientific advisers to Parties to the international treaties, which regulate the dumping of wastes and other matter at sea, have advised caution in relation to planned large-scale iron fertilization of the oceans to sequester carbon dioxide (CO_2).Knowledge about the effectiveness and potential environmental impact of iron fertilization is currently insufficient to justify large-scale operations, according to the Scientific Groups advising the Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (London Convention) and the 1996 Protocol thereto (London Protocol), which met for their annual meeting from 18 to 22 June 2007, in Santiago de Compostela, Spain. . . . According to the Intergovernmental Panel on Climate Change (IPCC), iron fertilization of the oceans may offer a potential strategy for removing carbon dioxide from the atmosphere by stimulating the growth of phytoplankton and thereby sequestering the carbon dioxide in the form of particulate organic carbon. However, the IPCC also stated that ocean iron fertilization remains largely speculative, and many of the environmental side effects have yet to be assessed. The Scientific Groups of the London Convention and London Protocol note with concern the potential for large-scale ocean iron fertilization to have negative impacts on the marine environment and human health. They therefore recommend that any such operations be evaluated carefully to ensure, among other things, that such operations

4. Conclusions on MARPOL 73/78 and the 1972 London Convention and the Precautionary Principle

MARPOL 73/78 included in its overall structure the application of the precautionary approach to all its activities in relation to the protection of the marine environment. However, as was stated above, it is very difficult to assess its actual working due the lack of a reliable database. As was observed, it is sometimes impossible to assess the current practice even of the States implementing the preventive principle, due to incorrect or insufficient submissions from States. Therefore, in the view of the present author, it is very problematic to draw any conclusions as to the implementation of the precautionary principle from the practice of the IMO. Moreover, taking into account that certain binding Resolutions of the IMO which are based on full scientific knowledge are not always implemented by the various users of the oceans, it is difficult to envisage how the precautionary principle may already be fully applicable within the structure of the IMO in relation to the protection of the environment.

There is certain evidence that the precautionary principle was relied upon within the London Convention (at least regarding the dumping of radioactive wastes). As was explained above, however, the application of this principle was not uncontested and led to many heated discussions. As Ringius observed, the eventual consent of many States to adhere to the total ban was dictated rather by the exigencies of public opinion than observance of the precautionary principle.

It must be noted that, as indicated above, although the measures contained in the 2006 amendment to the 1996 Protocol on carbon dioxide sequestration, appear to have been intended as an implementation of the precautionary principle, raised some concerns as to the effects of such techniques without full scientific knowledge. Such concerns put in doubt the usefulness of the precautionary principle as the best remedy in all instances of environmental protection. As evidenced by the example of carbon dioxide sequestration, full scientific knowledge may at times be necessary.

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are not contrary to the aims of the London Convention and London Protocol. Parties to the London Convention and the London Protocol are invited to provide further information relating to proposed large-scale ocean iron fertilization operations to the Secretariat and to the Scientific Groups as and when such information becomes available.'

Available online at http://www.imo.org/Newsroom/mainframe.asp?topic_id=1472&doc_id=8214 (last visited on 10 July 2008).

B. The Regional Marine Approach to the Precautionary Principle – the 1992 Convention on the Environmental Protection of the Baltic Sea Area (the Helsinki Convention)[173]

1. Short introduction to the Baltic Sea and the 1992 Helsinki Convention

Due to its unique geographical and ecological conditions, the Baltic Sea requires very efficient environmental regulation. It covers a rather small area in comparison to other oceans, but is one of the largest bodies of brackish water in the world. Its catchment area hosts about 85 million people. The Baltic Sea is an almost enclosed sea, as it is connected with the world's oceans by the very narrow and shallow waters of the Sound and the Belt Sea. Therefore, the same water and all the organic and inorganic matter in the Baltic remain there for about 30 years. The Baltic Sea is characterized by limited biodiversity due to the brackish character and in some areas low salinity of its waters.[174] The 1974 Helsinki Convention preceded the 1992 Convention. It was a unique instrument because all the sources of pollution around an entire sea were covered by a single convention, signed in 1974 by the then seven Baltic coastal states. The 1974 Convention entered into force on 3 May 1980. It was observed that already under the regime of the 1974 Convention the precautionary principle was applied, even without a provision directly referring to it.[175]

In the light of political changes and developments in international environmental and maritime law, a new Convention was signed in 1992. The Convention covers the whole of the Baltic Sea area, including inland waters as well as the water of the sea itself and the sea-bed. Measures are also taken in the whole catchment area of the Baltic Sea to reduce land-based pollution.[176] The Helsinki Commission or 'HELCOM' is the governing body. Its main task is to protect the marine environment of the Baltic Sea from all sources of pollution through co-operation between Denmark,

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[173] Signed in 1992, entered into force on 17 January 2000. The present Parties to the Convention are Denmark, Estonia, European Community, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden. The Convention was subject to amendments of: 31 December 2000 to Annex III, 31 December 2000 to Annex IV (Regulations 4, 6–8), of 1 December 2002 to Annex IV (Regulations 4 and 9–12), of 1 July 2004 to Annex IV (Regulations 4–13).

[174] See http://www.helcom.fi/environment2/nature/en_GB/nature/_print (last visited on 10 July 2008).

[175] M. Pyhälä et al., 'The Precautionary Principle and the Helsinki Convention', in N. de Sadeleer (ed.), *Implementing the Precautionary Principle: Approaches from the Nordic Countries, EU and USA* (2007) 143, at 145–6.

[176] See http://www.helcom.fi/Convention/en_GB/convention/ (last visited on 10 July 2008).

Estonia, the European Community, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden (Article 19).[177]

2. The Helsinki Convention and the precautionary principle

The Helsinki Convention is based on the precautionary principle, environmental impact assessment and the polluter-pays principle (Articles 3 and 7).[178] Article 3 paragraph 2 of the 1992 Helsinki Convention defines the precautionary principle as follows:

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[177] See http://www.helcom.fi/helcom/en_GB/aboutus/ (last visited on 10 July 2008). The duties of the HELCOM are listed in Article 20 of the Helsinki Convention:

> '1. the duties of the Commission shall be: a) to keep the implementation of this Convention under continuous observation; b) to make recommendations on measures relating to the purpose of this Convention; c) to keep under review the contents of this Convention including its Annexes and to recommend to the Contracting Parties such amendments to this Convention including its Annexes as may be required including changes in the lists of substances and materials as well as the adoption of new Annexes; d) to define pollution control criteria, objectives for the reduction of pollution, and objectives concerning measures, particularly those described in Annex III; e) to promote in close co-operation with appropriate governmental bodies, taking into consideration sub-paragraph f) of this Article, additional measures to protect the marine environment of the Baltic Sea Area and for that purpose:
> i) to receive, process, summarise and disseminate relevant scientific, technological and statistical information from available sources; and
> ii) to promote scientific and technological research; and f) to seek, when appropriate, the services of competent regional and other international organisations to collaborate in scientific and technological research as well as other relevant activities pertinent to the objectives of this Convention. 2. The Commission may assume such other functions as it deems appropriate to further the purposes of this Convention.'

[178] 'Fundamental principles and obligations: 1. The Contracting Parties shall individually or jointly take all appropriate legislative, administrative or other relevant measures to prevent and eliminate pollution in order to promote the ecological restoration of the Baltic Sea Area and the preservation of its ecological balance. 2. The Contracting Parties shall apply the precautionary principle, i.e. to take preventive measures when there is a reason to assume that substances or energy introduced, directly or indirectly, into the marine environment may create hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea even when there is no conclusive evidence of a causal relationship between inputs and their alleged effects. 3. In order to prevent and eliminate pollution of the Baltic Sea Area the Contracting Parties shall promote the use of the Best Environmental Technology if the reduction of inputs, resulting from the use of the Best Environmental Practice and the Best Available Technology, as described in Annex II, does not lead to environmentally acceptable results, measures shall be applied. 4. The Contracting Parties shall apply the polluter-pays principle. 5. The Contracting Parties shall ensure that measurements of calculations and emissions from the point sources to water and air and of inputs from diffuse sources to water and air are carried out in a specifically appropriate manner in order to assume the state of the marine environment of the Baltic Sea Area and ascertain the implementation of this Convention. 6. The Contracting Parties shall use their best endeavours to ensure that the implementation of this Convention does not cause transboundary pollution on areas outside the Baltic Sea Area. Furthermore, the relevant measures shall not lead either to unacceptable environmental strains on air quality and the

> The Contracting Parties shall apply the precautionary principle – that is, to take preventive measures when there is a reason to assume that substances or energy introduced, directly or indirectly, into the marine environment may create hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea even when there is no conclusive evidence of a causal relationship between inputs and their alleged effects.

The basic definition of the precautionary principle in the 1992 Helsinki Convention contains some of the main elements of the concept, such as the lack of full scientific certainty ('when there is the reason to assume that substances or energy introduced . . . into the marine environment may create hazards'). It also stresses the absence of the absolute requirement of 'conclusive evidence' of 'a casual relationship between inputs and their alleged effects'. It also equates precaution with prevention.

The definition of the precautionary principle in the 1992 Helsinki Convention is considered to be setting a lower threshold of scientific information for its application than the one set in Principle 15 of the Rio Declaration ('a reason to assume hazard').[179] In general, it may be said that the Helsinki Convention has incorporated to a great extent in its various plans and programmes the notion of the precautionary principle. The reliance on the precautionary principle in the 1992 Helsinki Convention was further confirmed in the 2003 Declaration of the Joint Ministerial Meeting of the Helsinki and OSPAR Commissions.[180] This Declaration dealt generally with the improvement of the state of the marine environment globally, in relation to biodiversity as well as to the environmental impact of shipping. The precautionary principle was expressly recognized in paragraph 9 of the Declaration. It reads as follows:

> We are convinced that the current state of scientific knowledge, coupled with a sound application of the precautionary principle, allows the immediate adoption of certain further environmental and nature protection measures with a view of achieving sustainable use of the sea and conservation of marine ecosystems. We invite the competent authorities and international bodies in the HELCOM and OSPAR maritime areas to develop and implement progressively specific policies and measures in line with the ecosystem approach. [181]

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atmosphere or on waters, soil and ground water, to unacceptably harmful or increasing waste disposal, or to increased risks to human health.'

[179] Pyhälä et al., *supra* note 174, at 147.

[180] Joint Ministerial Meeting of the Helsinki and OSPAR Commissions, Bremen, 25–26 June 2003, Agenda Item 6.

[181] See, e.g., the footnote which says as follows:

> 'It is understood that, in the context of the management of fisheries, the 'application of the precautionary principle' has the same result as the application of the

However, despite the precautionary principle having been embraced as a matter of policy, the only practical example to date of its application is related to the assessment of the adverse impact of PCB and DDT substances for immunological and reproductive disorders in Baltic seals, and led to the adoption of supplementary recommendations to limit the use and discharges of PCBs, as well as a moratorium on the hunting of seals. These recommendations were adopted prior to conclusive evidence being produced of a causal link between the discharges of these substances into the Baltic Sea and the impairment of seals.

> [T]o this day, seal hunting is still only allowed if it can be scientifically proven that it will not cause unacceptable harm of the seal population – an example of the adoption of the more rigorous version of the precautionary principle, with the burden of proof reversed.[182]

However, it appears that, with an exception relating to the above example, recommendations concerning the state of the Baltic environment had been adopted only on the basis of ample scientific evidence, not on the basis of application of the precautionary principle. There is a special HELCOM Monitoring and Assessment Group (MONAS), which assesses:

> trends in threats to the marine environment, their impacts, the resulting state of the marine environment, and the effectiveness of adopted measures. This work forms the basis for the work of HELCOM's other main groups, and helps to define the need for additional measures. HELCOM MONAS aims to ensure that HELCOM's monitoring programmes are efficiently used through horizontal co-ordination between the Commission's five permanent working groups.[183]

This is confirmed by HELCOM's own words describing how it works and on what basis it adopts relevant recommendations:

> The Helsinki Commission has been assessing the effects of nutrients and hazardous substances on ecosystems in the Baltic Sea for the past 25 years. The resulting assessment reports contain unique compilations of data and detailed analysis based on the scientific research carried out around the Baltic Sea, including the special monitoring programmes coordinated by HELCOM. HELCOM measures and monitors airborne and waterborne inputs of nutrients and hazardous substances (including radioactive substances), as well as the state

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precautionary approach, as referred to in, for example Article 6 of the 1995 UN Fish Stocks Agreement.'

[182] Pyhälä et al., *supra* note 179, at 146.

[183] Available online at: http://www.helcom.fi/groups/monas/en_GB/monas_main (last visited on 10 July 2008).

> of all the various compartments of the marine environment (water, sediments and biota).
>
> HELCOM's monitoring work provides valuable data to help experts understand and assess the interactions between the physical environment and all forms of marine life, with particular attention paid to the many and varied impacts of human activities.
>
> HELCOM's assessments help to improve our understanding of marine ecological processes and allow experts to evaluate the impacts of our activities on the marine environment. This work also helps in the setting of objectives for environmental quality, the formulation of policies, and the setting of priorities for actions designed to protect the marine environment, and ensure it is used sustainably.

The above described procedure relies entirely on full available scientific data and the exchange of data as the basis for Helsinki Commission decision making. Application of the precautionary principle is not explicitly included.

It may be interesting to note that the New Management Approach to the Baltic Sea, adopted in 2007, constitutes a radical departure from any other plan or programme previously undertaken by HELCOM and approaches the protection of the Baltic Sea Area environmental in a completely new manner. It therefore abandoned the piecemeal approach and relies on the Ecosystem Approach to Management, which reflects a jointly agreed vision of 'a healthy marine environment, with diverse biological components functioning in balance, resulting in a good ecological status and supporting a wide range of sustainable human activities'.[184] On the basis of the ecosystem approach, the protection of the marine environment had evolved from an event-driven pollution reduction sectoral approach to the ecosystem itself, as a starting point, and a shared concept of a healthy sea with a good ecological status. Further targets in reductions in pollution loads, as well as the extents of various human activities, will be determined by the ecosystem approach, 'incorporating the latest scientific knowledge and innovative management approaches into strategic policy implementation, and stimulating even closer, goal-oriented multilateral co-operation around the Baltic Sea region'.[185] The newly established Group will steer the implementation of the strategic Baltic Sea Action Plan to restore the good ecological status of the sea by 2021. One of the first tasks of the Group will be the elaboration of a comprehensive list of municipal waste water treatment plants. It will not be done on the basis of the precautionary principle, however, but on the basis of a step-wise approach and cost effectiveness.[186]

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[184] See http://www.helcom.fi/BSAP/en_GB/intro (last visited on 10 July 2008).

[185] See http://www.helcom.fi/environment2/en_GB/cover/ (last visited on 10 July 2008).

[186] See http://www.helcom.fi/press_office/news_helcom/en_GB/BSAP_IG1_Meeting (last visited on 10 July 2008).

IV. CONCLUDING REMARKS

The most difficult part of this chapter is an attempt to reach some general conclusions as regards the character of the precautionary principle. Even if we are not in full agreement with the above mentioned views expressed by Sunstein, who crushed the very purpose of the existence of the precautionary principle, it may be ventured that the above-analysed practice of States indicates that the precautionary principle indeed merits the description of 'a riddle wrapped in a mystery inside an enigma'.

In the view of the present author, Trouwborst's meticulous research on and very precise analysis of the precautionary principle presented in his two books[187] shows clearly the large number of issues which still have to be resolved, the character of which is very complex, unclear and confusing – such as the issue of significant harm and the burden of proof in international and national laws. Certain problems of interpretation may arise regarding these elements and how they are applicable in States' practice and the relationship of this principle with the concept of sustainable development (which in itself lacks well-defined normative content). However, some authors argue that 'the precautionary habit we must form is to consider *any* harm, serious or not, in a broader context'. This is a very far reaching postulate and probably does not reflect general law on this subject, but nevertheless indicates the lack of common standards.

Some of the domestic regimes are very complicated, and the burden of proof as regards the precautionary principle is part and parcel of a very sophisticated legal nexus and cannot be viewed in isolation from the general issues of the legal system of a State. Such is the case of Australia:

> in terms of environmental regulatory design, only small steps have been taken towards creating a coherent framework for fact finding and resolving issues of proof within both environmental risk regulation and precaution . . . Rather than developing an overarching general principle of proof in environmental matters, we suggest that the design of a suitable regulatory architecture governing proof should be context-dependent. Evidential concepts, which are not themselves static, have the potential to evolve further with a view to strengthening the precautionary principle in a variety of legal and administrative contexts.[188]

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[187] In particular see Trouwborst II, *supra* note 2.

[188] J. Jones and S. Bronitt, 'The Burden and Standard of Proof in Environmental Regulation: the Precautionary Principle in an Australian Administrative Context', in E. Fisher *et al.*, *Implementing the Precautionary Principle: Perspectives and Prospects* (2006) 137, at 156.

It must be also noted that the application of this principle is conditioned upon many limiting factors which may render the principle in reality ineffective. This principle is subject to the balancing of many interests, such as environmental, social and economic interests, on the basis of the criterion of proportionality.[189] The question arises whether in unfavourable socio-economic circumstances States would still accord priority to the precautionary principle (even if all grounds for its applicability existed). Trouwborst also mentions the principle of common but differentiated responsibilities as limiting the applicability of the precautionary principle in relation to developing countries, 'although generally speaking it does not appear to be a standard component of the principle itself'.[190] This statement may be disputed. The principle of common but differentiated responsibilities underlies all environmental obligations, in relation to both developed and developing countries. Therefore, it is of no importance whether or not it is a standard component of the precautionary principle, since it has to be taken into consideration vis-à-vis all environmental duties originating from all environmental treaty regimes.

It may also be observed that the problems of cost-effectiveness in relation to the precautionary principle, which are referred to above in relation, in particular, to developing States, are also quite discernible in relation to so-called States with economies in transition (that is to say, the members of the former Soviet bloc). As was observed above there is, in fact, only one known example of the application of the precautionary principle within the regime of the Helsinki Convention, which relates to the protection of seals. One of the reasons for the infrequent application of the precautionary principle by the States Parties to the Helsinki Convention is the nature of the principles of 'Best Environmental Practice' and 'Best Available Technology'. These two standards form part and parcel of the precautionary principle itself; and their realization is the cause of yet additional costs in relation to the implementation of the that principle.

Further confusion is caused by the unclear relationship between the Environmental Impact Assessment and the precautionary principle. In theory these two principles are separate, and the EIA relates to environmental hazards which are based on scientific certainty. However, in the practice of States it is sometimes very difficult to distinguish the principles (see e.g. the formulation of the precautionary principle in MARPOL 73/78 which included the EIA in the structure of the precautionary principle).

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189 Trouwborst II, *supra* note 2, at 280.
190 *Ibid.*

Finally, there is a very fine line distinguishing between the precautionary and preventive principles. The classical distinction is based on certainty: the principle of prevention is applicable when environmental hazards are well documented and known. However, in practice at times it is very difficult (if not impossible) to make a clear and firm dividing line between these two principles (an example of such confusion may be found in the definition of the precautionary principle in the Bamako Convention, which appears to use precaution and prevention interchangeably).

It may happen that measures adopted by a State in response to threats to the environment are prevention not precaution and *vice versa*, and States use these terms interchangeably. In the view of the present author only case-by-case study will be able to ascertain with complete certainty which principle was intended to be applied. Often measures applied by a State will be preventive measures even if they are labelled precautionary measures, as the detailed analysis of IMO practice evidenced. It may therefore be stated that in reality the precautionary principle is very rarely applied and its nature, consequences and impact on environmental law are very uncertain and unexplored. The present author adheres to the statement that:

> There is no definitive statement of 'the' precautionary principle, nor any agreement on when it applies or what it requires. Precaution is an overarching principle that will always require contextual elaboration . . . Perceptions of risk and precaution differ from country to country, subject to subject. It is impossible to separate purely 'scientific' judgments from political and values choices. Stronger versions of precaution recognise that definitions of what is at 'risk' are based on subjective assumptions and values.[191]

Therefore we have to acknowledge so-called 'State autonomy', i.e. the rights of each State to adopt precautionary measures, which involves recognizing 'legitimate differences of priority, and recognizing a wide variety of perspectives on risk and sources of information about source of risk' and the various levels in different States which trigger the precaution.[192] At times it may happen that States include the precautionary principle in name only and its application in practice excludes any serious considerations as regards the risk assessment.[193]

The meaning and role of the precautionary principle will also differ

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[191] McDonald, *supra* note 69; see also P.D. Harremoës *et al.* (eds), *The Precautionary Principle in the 20th Century: Late Lessons from Early Warnings* (2002), at 188.

[192] McDonald, *supra* note 69, at 161. See also P. Birnie and A. Boyle, *International Law and the Environment* (2002), at 123.

[193] See, e.g., J. Peel, 'Precautionary Only in Name? Tensions between Precaution and Risk Assessment in the Australian GMO Regulatory Framework', in E. Fisher *et al.*, *Implementing the Precautionary Principle: Perspectives and Prospects* (2006) 202, at 202–20.

depending on the context in which it is applied in the field of international environmental law. For example in such areas as the protection of biodiversity, social and economic issues will play a very important role. Thus it has been said that:

> those who may bear the immediate costs of precautionary decision making may be groups which are already vulnerable, disfranchised and poor. In particular, conservation approaches based on restricting access to and use of biological resources can impose major livelihood costs, and reversing the burden of proof can involve the imposition of unfeasible technical burdens on poor communities or poor countries. Tensions around the precautionary principle in this context echo broader debates about how biodiversity conservation should be pursued in a world of grappling with poverty, and how to achieve the elusive 'win-win' solutions which would make uncomfortable trade-offs between these values irrelevant.[194]

There is not one, definite and authoritative definition of the precautionary principle, but various versions of it, and its components have different notions, depending on the particular context. Therefore, being mindful of its unclear legal status and the uncertainty of its practical application, as it stands at present, it would perhaps be a futile effort to attempt to define this principle in a general manner. The better approach appears to be to analyse it on a case-by-case basis. Such an approach may suggest that there are very few true examples of the application of this principle, as evidenced by the practice of the IMO regarding oil pollution and of the Helsinki Commission. In these instances, it would appear that, while both of these organizations appear in principle to have fully embraced the precautionary principle, closer scrutiny reveals that, in the case of the IMO, it was really the principle of prevention that was being applied (and even this, indeed, not altogether successfully); whilst in the case of the Helsinki Commission there was but a single example of the application in practice of the precautionary principle.

The most recent example of the application of the preventive measures in the Baltic Sea area is the 2009 Clean Sea Guide, which provides ship masters with basic information on the pollution prevention regulations which have been established in the region by HELCOM. These regulations, in order to protect the marine environment of the Baltic Sea area from pollution, provide that all ships entering the area, both those flying the flag of the HELCOM Member States and also other ships, are urged to comply with the HELCOM anti-pollution regulations.[195] The Guide's

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[194] R. Cooney, 'A Long and Winding Road: Precaution from Principle to Practice in Biodiversity Conservation', in *ibid.*, 223, at 239.

[195] http://www.helcom.fi/press_office/news_helcom/en_GB/Clean_Seas_Guide_2009/.

emphasis is on 'prevention' not precaution. In fact, it may be noted that strict adherence to the existing rules on the prevention of pollution in the Baltic Sea would appear to ensure sufficiently the maintenance of a good ecological state of the Baltic Sea. The requirement of prevention, rather than the application of the principle of precaution, is a notable feature in the case of the Baltic Sea. The Baltic is designated as a 'special area' by MARPOL 73/78, which means that it is subject to more stringent measures of protection than other marine areas, due to its sensitive ecological state and the high level of pollution.[196]

Such an approach to environmental issues perhaps exemplifies a general trend in environmental management which is characterized by a more practical approach, possibly heralding the departure from setting very ambitious targets which may be impossible to achieve and adopting more humble but at the same time more realistic goals[197], which nonetheless are at times also difficult to achieve.[198] Therefore, 'prudence and caution' are recommended.

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[196] In accordance with the IMO's International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), under which the Baltic Sea area has been designated as a special area due to its extreme sensitivity to harmful substances, far-reaching prohibitions and restrictions on any discharge into the sea of oil or oily mixtures and garbage have been introduced by the Baltic Sea States. The discharges of noxious liquid substances are also strictly regulated. In addition, bans on discharges of sewage and incineration of ship-generated wastes within 12 nautical miles from the nearest land have been imposed by HELCOM. There is also a general ban on dumping and incineration of other wastes, not incidental to or derived from the normal operation of ships, in the entire Baltic Sea area. Available at website: http://www.helcom.fi/press_office/news_helcom/ en_GB/Clean_Seas_Guide_2.

[197] For example, the European Environment Agency made an observation concerning the improvement of the basic requirement of the submission of data: 'information supplied on waste shipments in particular is not sufficient to provide a clear picture of the situation at EU level, according to the agency. Better data could help EEA "tell whether waste shipments are driven by better treatment options, greater capacity or effective pricing"': available online at http://www.helcom.fi/press_office/news_baltic/en_GB/BalticAndEUnews8926958/.

The management of the Baltic Sea environment provides numerous examples of such concrete approach which is based entirely on available data, such as the Pollution Load Compilation programmes (PLC-Air and PLC-Water) which quantify emissions; the COMBINE programme which quantifies the impacts of nutrients and hazardous substances in the marine environment, also examining trends in the various compartments of the marine environment (water, biota, sediment) of nutrients and hazardous substances to the air, discharges and losses to inland surface waters, and the resulting air- and waterborne inputs to the sea; monitoring of radioactive substances (MORS) which quantifies the sources and inputs of artificial radionuclides, as well as the resulting trends in the various compartments of the marine environment (water, biota, sediment). It may be remembered that the 2007 Baltic Sea Action Plan will be based on available scientific knowledge.

[198] For example, as was announced on 16 December, the EU is 'highly unlikely' to meet its objective of halting biodiversity decline by 2010, according to a pessimistic mid-term review of progress made towards achieving this goal published by the European Commission. Available online at: http://www.endseurope.com/20226.

2. Sustainable development

I. INTRODUCTION

Sustainable development, like the precautionary principle, is one of the international environmental law concepts the true nature of which remains mysterious and elusive despite its wide use (or perhaps overuse). This chapter first deals with theories, views of doctrine and international jurisprudence regarding the concept. It further investigates what is the character of this concept in the areas of marine environmental protection, both global and regional (the IMO and the Baltic Sea).

II. SUSTAINABLE DEVELOPMENT – GENERAL CONSIDERATIONS

From its inception this concept provoked numerous discussions and arguments. The purpose of this general part is not to examine exhaustively the decisions of courts and tribunals dealing with this concept and the views of doctrine (a task, which is almost impossible to achieve and, anyhow, much has been written about it), but to concentrate on the controversies and difficulties surrounding the character of this concept, as a background to the practical study of its application by the IMO and in the Baltic Sea Area.

Much discussion concerning sustainable development has been devoted to its normative value, particularly after the 1992 Rio Declaration on the Environment and Development, adopted at the 1992 Conference on Environment and Development, which has been acknowledged as a codification of the constituent elements of sustainable development,[1] a task just as elusive as in the case of the precautionary principle. The Rio Declaration was a result of long evolution, which started in 1972 at the Stockholm Conference on the Human Environment. The Rio Declaration couched

[1] See, in particular, A. Boyle and D. Freestone, 'Introduction', in A. Boyle and D. Freestone (eds), *International Law and Sustainable Development: Past Achievements and Future Challenges* (1999) 1, at 1–18; N. Schrijver, 'The Evolution of Sustainable Development in International Law: Inception, Meaning and Status', in 329 *Receuil des Cours*, The Hague Academy of International Law (2007).

in peremptory terms ('shall') is a package deal, negotiated by consensus.[2] However, doubts were expressed after the 1992 Rio Summit whether the integration of the developmental and environmental issues was possible on an equal footing, in other words whether the idea embodied in the concept of 'international law in the field of sustainable development', which was characterized by international environmental law becoming part and parcel of general and broad international law in order to achieve the unifying goal of sustainable development, was at all workable.

As Boyle and Freestone explain, the Rio Declaration contains both substantive and procedural elements of sustainable development. The first cluster of elements (substantive) is mainly covered by Principles 3–8 of the Rio Declaration and the second one (procedural) by Principles 10 and 17.[3] None of these Principles are new but they are put together in the Rio Declaration in a coherent manner.[4] The substantive elements identified by the cited authors are as follows: the sustainable utilization of natural resources; the integration of environmental protection and economic development; the right to development; and striving for equity in the allocation of natural resources between future and present generations (inter- and intra-generational equity). The procedural principles deal with public participation in environmental decision-making[5] and environmen-

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[2] Boyle/Freestone, *supra* note 2, at 3; see also I.M. Porras, 'The Rio Declaration: A New Basis for International Co-operation', 1 *RECIEL* (1992–3) 245, at 245 and more generally 245–53, who writes that the Rio Declaration represented 'uneasy compromises, delicately balanced interests, and dimly discernible contradictions' between developed and developing countries 'held together by the interpretative vagueness of classic Un-esse'.

[3] Boyle/Freestone, *supra* note 2, at 9–18.

[4] *Ibid.*, at 9.

[5] The element of public participation in environmental matters is probably less problematic theoretically than the principle of common but differentiated responsibilities; however, its practical implementation on a municipal level is not uniform. It is accepted that the participatory right is composed of three elements: the right to participate in decision making; the right to information and the right of access to justice. This is the manner in which Principle 10 is construed in the Rio Declaration. Since this right encompasses quite a wide range of the forms of public participation, it is obvious that its application within domestic systems is very divergent. Certain progress was made in the furtherance of this right and its uniform application by the adoption of the 1998 Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters. The Convention is rights-based, encompassing procedural rights of participation and substantive right of persons of present and future generations to live in an environment of adequate health and well-being. The Convention established minimum standards for participatory rights, but of course it does not prevent States from adopting more extensive measures. However, it is ultimately within the sovereignty of the Parties to the Convention to implement it and set the applicable standards. Therefore, as was argued above, there is no uniformity in the level of standards, even within one region, Europe. There is not an instrument of general or universal character which would establish similar regulations for other, non-European States. The Johannesburg Summit reaffirmed the necessity of public participation in the full implementation of sustainable development,

tal impact assessment. Daniel Magraw and Lisa Hawke identify four core elements of the concept of sustainable development: intergenerational equity; intragenerational equity; the need to protect the environment; and the need to integrate economic, social and environmental policies.[6] Broadly, this classification corresponds with that adopted by Boyle and Freestone, as the whole element of environmental protection consists of a host of elements, such as sustainable utilization, the precautionary principle, etc.[7]

It has to be said that there is no uniform listing of all the relevant elements of sustainable development, and that there is a certain variance in the elements which are considered to be the constitutive components of this concept exists.[8] It may be noted, however, that variations in these fundamental components are not radically different. The present author adheres to the structure of this concept as presented by Boyle and Freestone, as probably most adequate.

A very few of these elements have a concrete content, such as sustainable utilization, which is a well-defined concept dealing with such issues as closed and open seasons for taking natural resources, the size of fishing

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and States pledged the furtherance of Principle 10 of the Rio Declaration, as well as taking full account of Principles 5, 7 and 11. The Plan of Implementation enumerates different sectors, such the management of natural resources; water cooperation; poverty eradication and energy, and lists various persons and institutions to be consulted in implementation of the participatory right.

[6] D.B. Magraw and L.D. Hawke, 'Sustainable Development', in D. Bodansky et al. (eds), *Oxford Handbook of International Environmental Law* (2007) 613, at 613–38.

[7] See, e.g., A.B.M. Marong, 'From Rio to Johannesburg: Reflections on the Role of International legal Norms in Sustainable Development', 16 *Geo. Int'l Envtl.L.Rev*. (2003–2004) 21, at 76; M. Pallemaerts, 'International Environmental Law from Stockholm to Rio', 1 *RECIEL* (1992) 254, at 254–66.

[8] The International Law Association (the 'ILA') Declaration on the Principles of International Law Relating to Sustainable Development. This principle is considered one of the seven principles constituting the principle of sustainable development. The New Delhi Declaration on Principles of International Law Relating to Sustainable Development (ILA, 2002) enumerates seven such elements: duty of States to ensure sustainable use of natural resources; the principle of equity and the eradication of poverty; the principle of common but differentiated responsibilities; the principle of a precautionary approach to human health, natural resources and ecosystems; the principle of public participation and access to information and justice; the principle of good governance; and the principle of integration and interrelationship, in particular relating to human rights and social and economic and environmental objectives, and is available online at: http://www.ila-hq.org (last visited on 10 July 2008). Duncan French, who has published extensively on this subject, enumerates the following elements: the principle of integration; the principle of sustainable use; the principle of equity and the right to sustainable development; and the duty to cooperate. He explains that the precautionary principle is significant; however, in his view, it is possibly limited to certain discrete areas of international law: D. French, 'Sustainable Development and International Environmental Law', in M. Fitzmaurice et al. (eds), *The Research Handbook of International Environmental Law* (forthcoming 2008).

gear, etc. The other elements have very fuzzy and ill-defined content and themselves are the subject of an ongoing debate, such as intergenerational equity, which is a pivotal element of sustainable development. The present author will focus on the core elements, which are the most controversial, i.e. intergenerational equity, common but differentiated responsibilities and the integration of environment and development.

The principle of integration of environmental protection and economic development is contained in Principle 4 of the Rio Declaration.[9] As Boyle and Freestone observed, 'the requirement of integration permeates the Rio instruments, as well as Agenda 21'.[10] The aim of Principle 4 was to secure environmental interests while taking developmental decisions within the national and international structures (as evidenced by Agenda 21).[11] However, the same authors rightly observe that Principle 4, as such, does not solve the conflict between environmental protection and economic development.[12] The so-called integration of economic development and environmental protection at the 1992 Earth Summit was greatly criticized by, e.g., Marc Pallemaerts, who said as follows: '[i]nternational environmental law runs the risk of being reduced to a mere appendage of international development law, and subordinated to economic rationality'.[13] The same author further explains that, although the principle of integration was included in many environmental agreements in the 1990s, it 'does not seem to have enhanced its effectiveness significantly'.[14] He further points out that, notwithstanding the inclusion in the 1994 Preamble to the Marrakesh Agreement Establishing the WTO of acknowledgement of the importance of a policy of integration in achieving the aim of free trade,[15] 'the lingering tensions between national and international environmental and social policies and the multilateral trading system demonstrate that the WTO commitment to sustainability has been rhetorical so far'.[16] The Millennium Declaration adopted by the Heads of Governments was an exception where environmental matters were included as the most important issues for the

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[9] Principle 4: 'Environmental protection shall constitute an integral part of the developmental process and cannot be considered in isolation from it'.

[10] Boyle/Freestone, *supra* note 2, at 10.

[11] *Ibid.* See Agenda 21, which stipulates that 'the more systematic consideration of the environment when decisions are made on economic, social, fiscal, energy, agricultural, transportation, trade and other policies' at Chapter 8.2.

[12] Boyle/Freestone, *supra* note 2, at 11.

[13] M. Pallemaerts, *supra* note 7, at 254–66.

[14] M. Pallemaerts, *supra* note 7, at 10.

[15] 'While allowing for the optimal use of the world's resources in accordance with the objectives of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so.'

[16] Pallemaerts, *supra* note 14, at 10.

twenty-first century: freedom equality; solidarity; tolerance; respect for nature; and shared responsibility.[17]

The 2002 World Summit on Sustainable Development (the 'WSSD') not only did not resolve the conflict between the economic development and environmental protection but:

> The old tension between environment and development re-emerged with stronger and sometimes opposing polarized views. Developing countries wanted (sustainable) development to be the central theme of the Summit. Developing countries felt that the international community's primary concern should be development and poverty eradication and environmental measures should be pursued to achieve such goals. Environmentalists and some developed countries, on the other hand, were concerned that the role of the environment in the sustainable development agenda was being further diluted to the point of having little or no significance . . . To put it mildly, the environment did not have a very good summit at Johannesburg. It arguably ended up mainly focusing on development and only marginally addressing environmental issues. The WSSD has been widely criticized for its failure to make any significant progress in promoting the environmental agenda. Johannesburg was supposed to reenergize the international environmental agenda and improve the role of environmental issues within the context of the sustainable development agenda, but it did not reach either goal. Some environmentalists believed that Johannesburg betrayed the spirit of Stockholm and Rio and were seriously concerned that development had overtaken the environment on the international agenda. Some argued that sustainable development was now simply 'development tout-court' with little or no consideration given to its environmental dimensions.[18]

Further, both main documents adopted at the WSSD, the Johannesburg Declaration and the Plan of Implementation (the PoI), contain very weak environmental language and lack extensive mention of environmental objectives. Galitzzi and Herklotz observe that 'the few references to the environment are, in fact, almost always in the context of sustainable development'.[19] Both these authors also point out that the Johannesburg Declaration recalls the Monterrey International Conference on Financing and Development and the Doha Ministerial Conference as the events which 'defined for the world a comprehensive vision for the future of humanity' (paragraph 9); in both events environmental concerns were almost absent from the agenda. In conclusion, this Declaration mentions environment only where relevant to economic and social goals and the

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[17] United Nations Millennium Declaration, G.A. Res.55/2. U.N.GAOR. 55th Sess., U.N.Doc. A/Res/55/2 (18 September 2000).

[18] P. Galitzzi and A. Herklotz. 'Environment and Development: Friends or Foes in the 21st Century?' (footnotes omitted) in M. Fitzmaurice and D. Ong (eds.), *Research Handbook of International Environmental Law* (forthcoming).

[19] *Ibid.*

overall stress is on development.[20] The Plan of Implementation is very similar to the Johannesburg Declaration in the treatment of the environment. It generally approaches natural resources as a basis of economic and social development.[21] Galitzzi and Herklotz sum up in the following way the WSSD and the environment:

> The World Summit on Sustainable Development failed to produce a strong and renewed environmental consensus in the international community. At Johannesburg, the environment was treated as a sideshow and focus was mostly placed on development and poverty eradication. As observed above, there are hardly any 'ecological' or environmental references in the documents adopted at the Summit. Most references are, in any event, purely related to the environment as a tool to promote economic and social development.[22]

The above clearly evidences that the principle of integration between economic development and the environment failed and environment is not an equal partner to the development. Therefore one of the most important (if not the most important) core elements of the concept has been almost eradicated.[23] In broad brushstrokes, the unresolved questions concerning the concept of intergenerational equity relate to its normativity and the legal scope of the structure of trusteeship within this concept.[24] It is noteworthy that the best known and perhaps over-used definition of sustainable development provided for by the 1987 World Commission on Environment and Development (the 'Brundtland Commission') describes it as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.[25]

Likewise, Principle 3 of the Rio Declaration expressly mentions intergenerational equity. The unclear legal content also characterizes the principle of common but differentiated responsibilities (hereinafter the 'CBDR') as one of the constituent elements of sustainable development. It may be said that the origin of this principle is a conflict between developed and developing States. Rajamani described this in a succinct manner:

> Fundamental differences of opinions, stemming from contradictory ideological premises, haunt the international environmental dialogue. These differences impact the pace, productivity, and ambition of the dialogue and therefore the

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[20] *Ibid.*
[21] *Ibid.*
[22] *Ibid.*
[23] Both Galitzzi and Herklotz assert that during the 2005 World Summit to monitor the progress of the Millennium Declaration environment was also marginalized.
[24] See in depth Chapter 3 of this book.
[25] G.H. Brundtland and WCED, *Our Common Future* (1987), at 43.

> ability of international environmental law to reverse or contain the powerful trends in global environmental degradation. In an attempt to bridge the differences, and due to the levels of influence the developing countries have managed to exert over the time, the dissonance in international environmental dialogue is translated into differentiation in international environmental treaties.[26]

The classical definition of this principle is enshrined in Principle 7 of the Rio Declaration.[27] It may be said that this principle, as formulated in the Rio Declaration, is an expression of an equitable approach, and also embodies the principle of fairness in international environmental law.[28] Differential treatment, as embodied in the principle of CBDR, according to Cullet is based on a premise that justice is a compulsory part of international environmental law, not an option.[29] Cullet argues that fairness and justice are indispensable in international environmental law, but that in a broader context there would be no legitimacy for international law, which is not built on principles of justice. Differentiation serves the purpose of fostering substantive equality.[30]

Implementation, in the sense that each and every country has primary responsibility for its development, but which, in order to achieve a compromise, had to be supplemented by the acknowledgement of Principle 7 of the Rio Declaration, i.e. the principle of common but differentiated responsibilities, which at the Rio Conference on Environment and Development (the '1992 Earth Summit') was a subject of disagreement between developed and developing countries. Most industrialized

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[26] L. Rajamani, *Differential Treatment in International Environmental Law* (2006), at 88.

[27] Principle 7 states:

> 'States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit to sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.'

The Declaration is available online at the website of the United Nations Environment Programme: http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=78&ArticleID=1163 (last visited on 10 July 2008).

[28] See T. Franck, *Fairness in International Law and Institutions* (1995).

[29] In depth see P. Cullet, 'Common but Differentiated Responsibilities', in M. Fitzmaurice et al. (eds), *supra* note 7 (hereinafter Cullet I); P. Cullet, *Differential Treatment in International Environmental Law*, (2003) (hereinafter Cullet II); this author distinguishes between corrective and distributive justice. Corrective justice means that wrongdoing must be compensated by the wrongdoer.

[30] Substantive equality is aimed at considering and taking into account inequalities, such as wealth: Cullet I, *supra* note 29.

countries adhered to the view that the principle of common but differentiated responsibilities applied only in the context of global environmental issues, whilst developing countries stressed that in Principle 7 of the Rio Declaration developed countries assumed responsibility 'in international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command'. This resulted in the issuing by the US delegates of the interpretative statement which squarely denied acceptance of any international obligation or liability or diminution of the responsibilities of developing countries under international law.[31]

Different authors adopt various classifications of the norms which introduce the differentiated treatment. For example, Magraw classifies the norms into 'differential' and 'contextual'.[32] The first category provides 'on its face' an explicit, possibly more advantageous set of standards, which favour a certain group of States. As an illustration of this, Magraw has recourse to the example of the GATT Enabling Clause. This, notwithstanding Article I of the GATT, permits the States Parties to accord differential and more favourable treatment to developing countries, with the exclusion from such treatment of other States Parties.[33] According to this author, such norms, by according preferential treatment to a group of States, express more that one type of interest.[34] Implicit differential treatment is termed 'contextual norms'. These norms appear to grant identical treatment to all States affected by them, but their application is characterized by variable treatment, which allows the balancing of different interests and characteristics.[35] Magraw illustrates such an instance by Article 2(1) of the International Covenant on Economic, Social and Cultural Rights.[36] Such 'contextual norms' are exemplified by the terms 'available resources' and 'appropriate means', which, although applicable to all States, as regards their implementation allow the taking account of particular

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[31] Pallemaerts, *supra* note 14, at 9.

[32] D.B. Magraw, 'Legal Treatment of Developing Countries: Differentiated, Contextual and Absolute Norms', 1 *Colo.J.Int'l.Entvt'lL&Pol'y* (1960) 69, at 69–99.

[33] Differentiated and More Favourable Treatment, Reciprocity and Fuller Participation of Developing Countries, 28 November 1979, GATT B.I.S.D. (26th Supp.) (1980), at 203–205.

[34] Magraw, *supra* note 32, at 73.

[35] *Ibid.*, at 75.

[36] Article 2 (1) reads as follows:

> 'Each party to the present Covenant undertakes to take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources, with the view of achieving progressively the full realisation of the rights recognised in the present Covenant by all appropriate means, including the adoption of legislative measures.'

national circumstances. Rajamani classifies the norms into explicit and implicit. Explicit norms correspond with Magraw's 'differential' norms and implicit with 'contextual'.[37]

There is a great variety of different ways to implement the differentiated treatment in multilateral environmental agreements. Rajamani identifies the following categories:

> provisions that differentiate between industrial and developing countries with respect to central obligations contained in the treaty, such as emissions reduction targets; provisions that differentiate between industrial and developing countries with respect to implementation, such as delayed compliance schedules, permission to adopt subsequent base years, delayed reporting schedules, and soft approach to non-compliance; and, provisions to grant assistance, *inter alia,* financial and technological.[38]

International conventions (such as the 1987 Montreal Protocol on Substances that Deplete Ozone Layer; the 1997 Kyoto Protocol; the 1992 Convention on Biological Diversity) contain numerous provisions which aim at remedying inequities in the position between States.[39] Some of the differential treatments are the cause of very acrimonious confrontations between developing and developed countries. An example of this is the Convention on International Trade in Endangered Species of Wild Fauna and Flora ('CITES'). CITES does not have special provisions granting differential treatment to developing countries. Most of the protected species are in the territories of developing countries, which do not have sufficient means to grant protection. The commercial use of such species and their by-products (i.e. ivory), proposed by some developing countries, would be beneficial for their economies. Such proposals, however, lead to acrimonious confrontations between developed and developing States.

Some doubts were expressed as to the practical implementation of this element in a global, multilateral context, and how such equities can be established in litigation, without the presence of all communities

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[37] This author explains:

'Differential norms, within the meaning of this book, refer to norms that either explicitly or implicitly permit differentiation between countries. Norms of differential treatment may be explicit in that norms by their clear terms provide for different treatment for different countries or groups of countries. Norms of differential treatment may be implicit in that, while the norm itself provides identical treatment to all countries affected by it, the application of the norm permits consideration of difference between countries.'

Rajamani, *supra* note 26, at 90.

[38] *Ibid*., at 93.

[39] See P. Birnie and A. Boyle, *International Law and the Environment* (2002), at 91–2.

concerned; what criteria would be applied in order to achieve an equitable solution between development and economic protection among differently developed States with different natural resources; and finally how the changes in political boundaries would be considered.[40] For example, the Climate Change Convention provides that the parties should act to protect the climate change system 'on the basis of equity and in accordance with their common but differentiated responsibilities' (Article 3, paragraph 1). The inclusion of this principle in the Climate Change Convention was dictated by the need to ensure that everyone would not become worse off (in the long run) if all the States declined to share responsibility for protecting the common resource.[41] This principle is traditionally understood as consisting of two elements: the first concerning the common responsibilities for the protection of the environment on national, regional and global levels; and the second concerning the taking into account of different circumstances, in particular, each State's contribution to the creation of a particular environmental problem and each other's ability to prevent, reduce and control the threat.[42] The second element is based on a concept of an obligation to make resources available to developing States rather than the developed States only assisting them. The concept of common but differentiated responsibilities also takes into account the economic and social reality, which in fact means that a much more flexible approach is adopted to global environmental issues.[43] There are, however, quite a few stumbling blocks in the implementation of this principle, e.g. how an international agreement can precisely reflect the contribution of particular States to environmental problems; and whether it is a correct approach to define an obligation of a State on the basis of its contribution to environmental damage.[44] The whole concept is again rather ill-defined and imprecise from the normative point of view,[45] and its legal content does not really define what the precise scope of obligations and corresponding

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[40] V. Lowe, 'Sustainable Development and Unsustainable Arguments', in A. Boyle and D. Freestone (eds), *International Law and Sustainable Development: Past Achievements and Future Challenges* (1999) 19, at 29.

[41] Porras, *supra* note 2, at 250.

[42] *Ibid.*

[43] D. French, 'Developing States and International Environmental Law: The Importance of Differentiated Responsibilities', 49 *ICLQ* (2000) 35, at 41.

[44] *Ibid.*, at 48.

[45] There is a host of very different views on the normative content of this principle. Some of the authors, like Philippe Sands, treat its general status as an open question (P. Sands, *Principles of International Environmental Law* (2003), at 289); Patricia Birnie and Alan Boyle look upon it as a 'framework principle' and just as 'soft law' (Birnie/Boyle, *supra* note 39, at 300); Dinah Shelton sees the status of this principle as 'not entirely clear' and queries whether:

rights is.[46] Even the authors who have contrasting views, asserting that environmental law, unlike from developmental law, encompasses the language of rights and duties, admit that the framework of rights and duties in environmental law assisted in 'conveying the idea . . . that environmental obligations are not subject to equitable balancing of competing interests'.[47] It is noted that some rules of international environmental law (such as the inclusion of the principle of common but differentiated responsibilities in several multilateral environmental agreements) are subject to modification by States if there is the political will to do so. In other branches of international environmental law, such as the allocation of transboundary natural resources, however, the concept of the inclusion of environmental impact as one of the criteria in the establishment of equitable regimes for the utilization of shared resources was not endorsed.[48] Rajamani asserts that even though there is insufficient evidence that this principle has entered the body of international (environmental) law, 'it may still possess a "species of normativity, implying a certain legal gravitas"', and it may form within the context of international environmental law 'the bedrock of the burden-sharing arrangments crafted in different environmental treaties' and constitute part and parcel of the conceptual apparatus of a particular regime, and in that capacity 'it forms the basis for the interpretation of existing obligations and the elaboration of future international obligations within the regime in question'.[49] The above, comprehensive description of the role which the CBDR principle plays in international environmental law (and

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'it is a fundamental principle of international environmental law, a bundle of some or all of the above factors that lead to equitable decision-making, or itself a rule of equity remains debated.'

D. Shelton, 'Equity', in D. Bodansky et al. (eds), *Oxford Handbook of International Environmental Law* (2007) 639, at 657. Urlich Beyerlin views Principle 7 as containing 'principle of co-operation': U. Beyerlin, 'Different Types of Norms in International Environmental Law. Policies, Principles and Rules', in *ibid.*, 425, at 442.

[46] See in depth Cullet II, *supra* note 29, at 83–93; see also Y. Matsui, 'The Principle of "Common but Differentiated Responsibilities"', in N. Schrijver and F. Weiss, *International Law and Sustainable Development: Principles and Practice* (2004) 73, at 96; See comments on the various theories concerning sustainable development in Marong, *supra* note 7, at 43–76; see also Rajamani, *supra* note 26. Although Günther Handl argues that sustainable development is the pivotal concept, round which legally significant expectations regarding environmental behaviour are crystallizing, and that it may evolve into the norm of jus cogens. He stresses definitional problems surrounding this concept: G. Handl, 'Environmental Security and Global Challenge', 1 *YBIEL* (1990) 3, at 25–6.

[47] X. Fuentes, 'International Law-Making in the Field of Sustainable Development: The Unequal Competition Between Development and the Environment', in Schrijver/Weiss, *supra* note 46, 7 at 20 and more generally 7–51.

[48] *Ibid.*

[49] Rajamani, *supra* note 26, at 160.

at the same time in sustainable development) does not conceal the fact that the CBDR lacks legal precision. The World Summit on Sustainable Development ('the Johannesburg Summit' or the 'WSSD') in 2002 further evidenced that under the sustainable development umbrella States understand different legal (or non-legal) concepts, and that some of its components, in particular common but differentiated responsibilities, still result in completely polarized views as to legal content, legal consequences and the structure of rights and obligations.

The manner in which the WSSD Plan of Implementation referred to the principle of common but differentiated responsibilities resulted in acrimonious exchanges between developed and developing States.[50] It has to be noted, however, that certain authors perceive that, as a result of the 2002 Johannesburg Summit on Sustainable Development, 'the principle of common but differentiated responsibilities emerged strengthened, broadened and invigorated by WSSD',[51] as its scope has been broadened to encompass such goals as poverty eradication. Such a wide interpretation of this principle requires a well-developed framework of implementation, with the implications of the increased commitments to financial aid; the provision in treaty regimes for the structures facilitating the application

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[50] Plan of Implementation (PoI), para. 81, cited by Pallemaerts, *supra* note 14, at 9. The contentious paragraph of the PoI asks States for a 'substantial increased effort, both by countries themselves and by the rest of international community' for the 'implementation of Agenda 21 and the achievement of the internationally agreed development goals'. As Pallemaerts comments, 'In this paragraph, the recognition that each country has primary responsibility for its own development' is counterbalanced by the proviso, 'taking fully into account the Rio principles, including in particular the principle of common but differentiated responsibilities', again followed by an *in extenso* question from the text of Principle 7 of the Rio Declaration. This compromise was the only way out of a stalemate in which most industrialized countries adamantly insisted that the principle of common but differentiated responsibilities applied only in the context of action to address threats to the global environment, while developing countries wished to emphasize, in particular, the sentence in Principle 7 in which developed countries 'acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of pressures their societies place on the global environment and of the technologies and financial resources they command'. The same author explains that this statement lead to the US delegation making the following statement:

> 'The United States does not accept any interpretation of Principle 7 that would imply a recognition or acceptance by the United States of any international obligations or liability, or any diminution of the responsibilities of developing countries under international law,'

Pallemaerts, *supra* note 14, at 9.

[51] M.-C. Cordonier Segger et al., 'Prospects for Principles of International Sustainable Development Law after the WSSD: Common but Differentiated Responsibilities, Precaution and Participation', 12 *RECIEL* (2003) 54, at 58. See also M.-C. Cordonier Segger and A. Khalfan (eds), *Sustainable Development Law, Principles, Practices & Prospects* (2004) at 137–43.

of this principle; and the inclusion of this principle in the context of social and economic developments.[52] This above statement does not refer to its legal content, but rather to its political role in structuring international environmental law and combating poverty.

The question then may be posed if the core principles of the concept of sustainable development are so vague in their legal content, what are the normative content and the definition of sustainable development itself? Doctrine in this respect remains mostly unhelpful due to the largely contradictory character of various pronouncements as regards sustainable development.

The most extreme condemnation of the concept of sustainable on the economic, moral and ethical grounds was submitted by Professor Wilfred Beckerman.[53] The main premise of his critique is based on an argument that tragic environmental conditions in the world are due to poverty and lack of respect for human rights, not 'un-sustainable' development, which in itself is no more than an ill-conceived and harmful catch-phrase. Only the gist of Beckerman's critique will be presented here as it impossible within the structure of this chapter to describe all the arguments against sustainable development. Beckerman asserts that:

> the support for sustainable development is based on a flagrant disregard of the relevant factual evidence . . . It is founded of two indefensible propositions. The first is the positive proposition that economic growth will soon come up against the limits of resource availability. It is argued that action is required to reduce to 'sustainable' levels the rate at which resources are used – an impossible task, of course, unless we were to stop using some resources completely . . . The second fundamental principle underlying the campaigns for sustainable development is that it represents the moral high ground. Apparently, it does so largely because it places more emphasis on intergenerational equity than do conventional economic principles . . . In fact, coherent reasons are rarely given for believing that sustainable development is an ethically superior goal to the conventional economists' goal of maximising the sum of human welfare over future generations, and vague hand-waving in the direction of intergenerational justice or be enough to shame any critics of sustainable development[54] . . . if therefore the increasing popularity of the concept of sustainable development cannot be explained by its intellectual strength, its growing influence on international and national policy might perhaps be better explained by reference to sociological phenomena, such as the public's appetite for dramatic environmental scare stories or politician's tendency to jump on media-supported bandwagons.[55]

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[52] Cordonier Segger et al., *supra* note 51, at 58.

[53] W. Beckerman, *A Poverty of Reason: Sustainable Development and Economic Growth* (2003).

[54] *Ibid.*, at pp. xi and xii.

[55] *Ibid.*, at pp. xii.

Beckerman is of the view that the popularity of sustainable development is exploited by certain bodies to gain more power and have access to subsidies. These include manufacturers of e.g. low-carbon forms of energy, bureaucrats who aim at expanding their budgets and obtain promotion by showing more projects they have to manage and how many more regulations they have to implement; media which paint for the public a picture of an apocalyptic state, in which they live on the edge due to environment disaster, instead of 'leading rather boring and monotonous lives'; and, lastly, environmental pressure groups attempting to expand their memberships and budgets.[56] Beckerman is particularly critical as regards the moral and legal premises on which intergenerational justice is based and, as an economist, is of the view that:

> Before asking present generations – including the poorer members – to make sacrifices in the interests of future generations, one should take account of the strong likelihood that the latter will be far richer than the former. No moral credit can be earned by redistributing from the poor to rich.[57]

A reserved and cautious approach to sustainable development is represented by Professor Lowe, who argues that views based on the premise that sustainable development has a normative value (in relation to the judgment in the *Gabčikovo-Nagymaros* case), are simply 'not sustainable'.[58] He states that sustainable development as such is not a norm, any more than a label for a set of norms. It lacks normativity, as it 'by definition, must express itself in normative terms: it must be possible to phrase a norm in normative language'.[59] Sustainable development is deprived of 'a fundamentally norm-creating character'.[60] It is, according to Lowe, a 'meta-principle' which may exercise a sort of 'interstitial activity, pushing and pulling the

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[56] *Ibid.*, at pp. xii and xiii. This author further says:

> 'Backed up by politicians who can recognise a good bandwagon when they can see one, this coalition of forces is certain to win – at least in rich countries. Everybody can join. Any pet project – ranging from dislike of traffic congestion and concerns for the bald eagle to fear that our grandchildren will be deprived of essential materials for survival – can qualify for inclusion under sustainable development banner. No scientific proof, no serious logical argument is needed to ensure that one's pet project or preference wins approval is to cant mantra 'this is needed in the interests of sustainable development' or to refer knowingly to the dictates of the mysterious precautionary principle.'

[57] *Ibid.* He wrote about this in several publications on intergenerational justice, such as W. Beckerman and J. Pasek, *Justice, Posteriority, and the Environment* (2001).

[58] Lowe, *supra* note 40, at 30.

[59] *Ibid.*, at 26.

[60] *Ibid.*, at 30.

boundaries of true primary norms when they threaten to overlap or conflict with each other'.[61] Therefore, such a norm according to the same author is a 'modifying norm', influencing the relationship between other norms.[62] It will acquire normative force and, when used by a judge, 'it will colour the understanding of the norms that it modifies'. It is, therefore, a political rather than legal principle. Lowe's statement that sustainable development fundamentally lacks norm-creating character was criticized by Beyerlin who stated as follows:

> If [this statement] should mean that this concept can never be a source from which subsequent (legal) norms can flow, this perception is hardly persuasive. First, it somehow contradicts Lowe's understanding that the sustainable development can modify a primary norm because, if doing so, it would possibly generate a new (modified) norm. Moreover, it neglects the experience that political or moral ideals, although not possessing normativity of their own, can be catalysts in the process of further developing international law.[63]

Professor Sands expressed dramatically different views. Commenting on the abovementioned *Gabčikovo-Nagymaros* case, he said that this sustainable development has a normative content (therefore is more than a 'mere concept') and is already a principle which is a constituent part of modern international law, not only due to its inescapable logical necessity, but also by reason of its wide and general acceptance by international community.[64] Beyerlin represents a view which is a middle way between these two extreme views (he accords the concept of sustainable development normativity under certain conditions). According to this author, prima facie, the 'composite' term 'sustainable development' defines:

> a political value that deserves respect in today's international relations. As indicated by the term 'development', it does not set a clear target to be finally achieved but instead points to a process of interaction that should be set in motion, without saying by whom.[65]

He is also of the view that certain definitions of sustainable development (such as the Brundtland definition) gave life to this concept. Drawing from Principle 4 (the principle of the integration of the environment and development) of the Rio Declaration, Beyerlin reaches the conclusion that:

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61 *Ibid*., at 31.
62 *Ibid*., at 33.
63 Beyerlin, *supra* note 45, at 445.
64 Sands, *supra* note 45, at 254; P. Sands, 'International Courts and Tribunals and the Application of the Concept of "Sustainable Development"', 3 *Max Planck Y.B. UN.L* (1999) 389, at 389–407.
65 Beyerlin, *supra* note 45, at 443.

> Profiled in such a way, sustainable development may be understood as a normative concept that gives important impulses and political guidance for all players acting in the field of international environmental protection and the environment. However, there is continuing uncertainty among states in regard to the exact meaning and scope of this concept.[66]

Most importantly, however, he is of the view that sustainable development, 'because of its irridescent content and scope, has been assigned to the sphere of mere "political ideals". It is, however, an apt source from which subsequent legal norms may flow.'[67] Professor Boyle suggests that sustainable development may be assessed as a 'soft law general principle':

> Modifying norms and principles need not impose obligations or regulate conduct, they do not depend on State practice and they do not need the same clarity or precision as rules. General principles of this kind may be soft, but . . . legally irrelevant when courts or international bodies have to apply or develop international law.[68]

Magraw and Hawke assert as 'the most important implication of the concept of sustainable development . . . its focus on a holistic approach to policies that may affect development and environment'.[69] They emphasize that sustainable development is based on interdependence of the biosphere, of human endeavours *inter se*, and of human activities and nature. Consideration of these interdependencies requires the integration of a variety of factors.[70] This is the role of the principle of integration (Principle 4 of the Rio Declaration), which influences policy makers to take account of these interdependencies and to consider the impact of their policies.[71] Magraw and Hawke have a practical approach to the problem of sustainable development and observe that achieving it requires the utilization of natural resources in a sustainable manner, as well as bringing local (indigenous) communities into the decision-making process.[72] These authors present a very useful list of tools which are indispensable to implement the concept of sustainable development, such as transparency, public participation and access to justice, impact assessment and accounting techniques.[73]

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66 *Ibid.*
67 *Ibid.*, at 447.
68 A. Boyle, 'Soft Law in International Law-Making', in M. Evans (ed.), *International Law* (2006) 141, at 153.
69 Magraw/Hawke, *supra* note 6, at 628.
70 *Ibid.*
71 *Ibid.*
72 *Ibid.*, at 629.
73 *Ibid.*, at 632–7.

The existing jurisprudence of international courts and tribunals sheds very little light on the issue of the legal nature of sustainable development. It may be said, however, that the judgment of the ICJ in the *Gabčikovo-Nagymaros* case gave the impetus to the discussion on sustainable development at international judicial forums.[74] The Court noted:

> In order to evaluate the environmental risks, current standards must be taken into consideration. This is not only allowed by the wording of Articles 15 and 19, but even prescribed, to the extent that these articles impose a continuing – and thus necessarily evolving – obligation on the parties to maintain the quality of the water of the Danube and to protect nature.
>
> The Court is mindful that, in the field of environmental protection, vigilance and prevention are required on account of often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage.
>
> Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often without considerations of the effects upon the environment. Owing to new scientific insights and to a growing awareness of the risks for mankind – for present and future generations – of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also continuing with activities begun in the past. This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development [paragraph 140].

In Sands' view this statement of the Court evidences that sustainable development has a 'judicial function' and that it is most likely that this concept entered the body of international customary law, 'requiring different streams to be treated in an integrated manner'.[75] However, the majority of writers have doubts as regards the Court's statement with respect to the nature of sustainable development. As was observed above, Lowe regards this statement as 'not sustainable', and Magraw and Hawke consider this statement of the Court as indicating that the majority of the Court treats sustainable development as a 'concept' which has 'substantial relevance'.[76] These authors observe, however, that:

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[74] *Case Concerning the Gabčikovo-Nagymaros Project (Hungary v. Slovakia)*, Judgment of 25 September 1997 [1997] ICJ Rep. 7; see also *Case Concerning the Gabčikovo-Nagymaros Project (Hungary v. Slovakia)*, Judgment of 25 September 1997 (Separate Opinion of Vice-President Weeramantry) [1997] ICJ Rep. 88; see also Lowe, *supra* note 40, at 19–37.

[75] Sands, *supra* note 45, at 254.

[76] Magraw/Hawke, *supra* note 6, at 624.

> the Court failed to develop the analysis further. This analysis seems to fall short of stating that sustainable development is one of those new norms or standards to which the majority referred.[77]

Judge Weermantry's assessment of sustainable development as voiced in his Separate Opinion is less cautious, as he assesses sustainable development as 'a principle with normative value' which found acceptance by the global community.[78]

The Court increasingly refers to the concept of sustainable development. In the 2006 Order on the Request for the Indication of Provisional Measures in the *Case Concerning Pulp Mills on the River Uruguay*, the Court noted that:

> the present case highlights the importance of the need to ensure environmental protection of shared natural resources while allowing for sustainable economic development, whereas it is in particular necessary to bear in mind the reliance of the Parties on the quality of the water of the River Uruguay for their livelihood and economic development; whereas from this point of view, account must be taken of the need to safeguard the continued conservation of the river environment and of the rights of economic development of the riparian States; (para. 80 of the Order).[79]

However, neither the jurisprudence of the ICJ nor that of other courts and tribunals has definitely resolved or clarified the legal character of sustainable development. One such example is the so-called *Iron Rhine* case in which the Arbitral Panel said:

> There is considerable debate as to what, within the field of environmental law, constitutes 'rules' or 'principles'; what is 'soft law'; and which environmental treaty law or principles have contributed to the development of customary international law. Without entering further into those controversies, the Tribunal notes that in all of these categories, 'environment' is broadly referred to as including air, water, land, flora and fauna, natural ecosystems and sites, human

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[77] *Ibid.*

[78] *Case Concerning the Gabčikovo-Nagymaros Project (Hungary v. Slovakia)*, Judgment of 25 September 1997 (Separate Opinion of Vice-President Weeramantry) [1997] ICJ Rep. 88, at 88. In his presentation, 'Sustainable Development: An Ancient Concept Recently Revived' in 2002 (Johannesburg) at the United Nation's Environment Programme's Global Judges Symposium on Sustainable Development and the Role of Law, he stated that sustainable development is a customary law principle with *erga omnes* character; see *supra* note 74.

[79] *Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Request for Indication of Provisional Measures, Order of 13 July 2006 [2006] ICJ Rep. 19, at para. 80. See also: http://www.icj-cij.org/docket/files/135/11235.pdf (last visited on 10 July 2008). On the Order see M. Fitzmaurice, 'Pulp Mills on the River Uruguay (or not, as the case may be)', 2 *Hague Justice Journal/Journal Judiciaire De La Haye* (2007) 61, at 61–4.

> health and safety, and climate. The emerging principles, whatever their current status, make reference to conservation, management, notions of prevention and of sustainable development, and protection for future generations (para. 58 of the Arbitral Award). Since the Stockholm Conference on the Environment in 1972 there has been a marked development of international law relating to the protection of the environment. Today, both international and EC law require the integration of appropriate environmental measures in the design and implementation of economic development activities. Principle 4 of the Rio Declaration on Environment and Development, adopted in 1992 . . . which reflects this trend, provides that 'environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it'. Importantly, these emerging principles now integrate environmental protection into the development process. Environmental law and the law on development stand not as alternatives but as mutually reinforcing, integral concepts, which require that where development may cause significant harm to the environment there is a duty to prevent, or at least mitigate, such harm . . . This duty, in the opinion of the Tribunal, has now become a principle of general international law. This principle applies not only in autonomous activities but also in activities undertaken in implementation of specific treaties between the Parties. The Tribunal would recall the observation of the International Court of Justice in the *Gabčikovo-Nagymaros* case that '[t]his need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development' (. . .). And in that context the Court further clarified that 'new norms have to be taken into consideration, and . . . new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past' (. . .). In the view of the Tribunal this dictum applies equally to the Iron Rhine railway [paragraph 59 of the Award].[80]

The Arbitral Tribunal made some interesting statements, however, which to a certain degree contribute to a further understanding of the relationship between environment and development. First, it approached environment and development as mutually reinforcing, integral concepts, not as alternatives; secondly, the development cannot be unlimited but is restricted by the significant harm to the environment it may cause. Further, such significant harm is linked to the duty to prevent it or at least to mitigate it. The Tribunal acknowledged that such a duty had become a principle of general international law.

In the light of the above, it is a very daunting, if not impossible, task to draw any general conclusions as to the elusive nature of sustainable development, its components and its effectiveness. As Boyle and Freestone rightly note, the inclusion of Article 4 in the Rio Declaration has not solved the

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[80] *Iron Rhine Arbitration* (*Belgium v. Netherlands*), Arbitration (2005), at 28–9, available at: http://www.pca-cpa.org/upload/files/BE-NL%20Award%20corrected%20200905.pdf (last visited on 10 July 2008).

continuing conflict between environmental protection and development.[81] The ambiguous formulation of this principle can give rise to divergent interpretations: one according supremacy to environmental protection over development; and the other asserting the opposite, the supremacy of development over environmental protection.[82] In the view of the present author, attempts to define the concept from the normative point of view are a futile exercise. Sustainable development, even as a purely political statement, must have impacted in some way on international environmental law (the second part of this chapter will investigate this issue within the IMO and the Baltic Sea context). As French observes:

> Sustainable development has come a long way since it was first discussed in the 1980s . . . Despite the painfully slow rate of implementation, sustainable development remains a significant concept in international discourse. . . . [t]he enormity of challenges – both socio-economic and ecological – makes working towards sustainable development imperative both locally and on the global agenda. Of course, law cannot, in and of itself, meet such challenges; nevertheless, it has a fundamental role to play in establishing necessary framework, a framework that includes rule-development, organisational change and the elaboration of juridical principle[83]

The previous analysis concerning sustainable development indicates that there is no uniform and widely accepted notion of sustainable development and that, perhaps, the efforts to identify such definition will be futile. There are some authors who indeed abandon the positivist legal analysis of the nature of this concept as yielding only limited answers, and look at the broader structures other than legal, such as international relations discourse, which takes account of a multiplicity of actors, including States, civil society, epistemic communities and individuals. This idea is based on a premise that the genesis of this concept is not attributable exclusively to the activities of States, and therefore a statist approach to law-making does not reflect reality.[84] Further, it has been argued that a more illuminating analytical approach would be to investigate how the law can contribute to the realization of sustainable development. [85]

Recent practice also indicates that there is no more integration of economic development and environment in the form in which it was perceived at the 1992 Rio Summit, as at present economic development has taken

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[81] Boyle/Freestone, *supra* note 2.

[82] M. Pallemaerts, 'International Environmental Law from Stockholm to Rio: Back to the Future?', in P. Sands (ed.), *Greening International Law* (1993) 1, at 17.

[83] French, *supra* note 8.

[84] Marong, *supra* note 7, at 75–6.

[85] *Ibid.*, at 76.

precedence over environmental protection. However, the most recent statement of Mr Stavros Dimas, a member of the EU Commission responsible for the environment, may be of interest:

> The idea that there is a direct trade-off between either protecting nature or economic growth is an outdated and a mistaken argument. It is perfectly possible to do both and the reality is that a degraded environment acts as a brake on development. Since all human activity ultimately depends on nature a genuinely sustainable economy depends on a sustainable environment . . . I can assure you that we aim to design and implement the policy in a way that does not restrict economic development. But, as I mentioned at the beginning of this presentation, the loss of biodiversity is a threat of the same magnitude as climate change. I am therefore convinced that future generations will thank us for taking decisive measures to protect our natural heritage. This statement perhaps indicated that the environment is going to be once again an equal partner of the development . . .[86]

III. SOME EXAMPLES OF THE APPLICATION OF THE CONCEPT OF SUSTAINABLE DEVELOPMENT: THE IMO AND THE 1992 BALTIC SEA AREA

1. The IMO and Sustainable Development

There are some examples from the practice of the IMO and the Helsinki Commission[87] indicating that sustainable development has very diversified uses. In some cases it is treated as a political statement more than a term with legal content, more as a guideline setting the general policy than precise legal obligations. In other instances, it has a certain political element, but combined with more specific obligations. The application of the concept of sustainable development in the Baltic Sea area, on the other hand, constitutes a very interesting example of how it can work in practice in concrete terms, not based on the theoretical considerations presented above. Within the IMO, by contrast, sustainable development is treated in a rather general manner.

An example of the first use of the term is the 2005 conference on 'Sustainable Shipping – Progress in a Changing World', during which the Secretary-General of the IMO stated:

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[86] Stavros Dimas, Member of the European Commission, responsible for environment Natura 2000 an Opportunity for or an Obstacle to Development ALDE Public Debate Brussels, 16 April 2008, available online at: http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/08/200 (last visited on 10 July 2008).

[87] On the general issues of the IMO and the Helsinki Convention see Chapter 1.

> There is a host of other definitions, all of which contain similar concepts, and I could go on but, however, . . . I hope we can at least agree that the concept of sustainability is not only desirable but in fact an absolute prerequisite if we are to look beyond the requirements of our own generation and consider our legacy to generations to come.[88]

The speaker observed that it is a formidable task to implement in practice the three pillars of sustainable development: environment, economic and social issues. In the area of shipping, sustainability should be evaluated on the basis of:

> the contribution of the activity as a whole makes to global economic and social prosperity, and weigh that against any detrimental effect it may have, mainly on our environment but also in other regards.

The Resolution A.901(21), adopted in 1999 on 'IMO and Technical Co-operation in the 2000s' sets out the Objectives of the IMO as a commitment:

> to ensuring the fulfilment of the Organisation's aims and objectives and to setting of clear priorities for the purpose of achieving them in a uniform manner on a global basis; and directed to Committees, under the co-ordination of the Council, to focus their attention on, among other subjects, strengthening the Organisation's technical co-operation programmes and delivery to achieve sustainable development and effective implementation of the Integrated Technical Co-operation Programme.

Another example is a very recent one from the practice of the Marine Environmental Protection Committee, a Resolution on Prevention of Air Pollution from Ships,[89] in which it was stated:

> Climate change will impact all, but most severely the less developed and vulnerable countries. The response to climate change has, therefore, to be rooted in sustainable development and equity, recognizing the vulnerability of the least privileged countries and their need for economic growth and poverty alleviation.

An example of the second, more concrete use of the concept of sustainable development can be found in the paper presented by Mr Hamzah, Director-General of the Maritime Consultancy Enterprise on Ports and

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[88] Document on file with the author.

[89] MEPC, 57th session Agenda item 4, 21 January 2008, available online at: http://www.endseuropedaily.com/docs/80403d.pdf (last visited on 10 July 2008).

Sustainable Development.[90] In this paper he presents certain concrete postulates. After an initial general reference to sustainable development, he gives examples of certain more precise manifestations of the concept. He starts the general definition of the concept as follows:

> In this paper, the concept of sustainability is defined as development that meets present needs without compromising the future. In the Brundtland Report sustainability is defined as 'the ability to meet today's global economic, environmental and social needs without compromising the opportunity of future generations to meet theirs'. The emphasis is on global economic, environmental and social development of humanity. Here lies the difference between the earlier concepts of sustainability in traditional societies whose development horizon was limited to its territorial limit.

However, later in the study, the author offers certain concrete examples of how sustainable development will be achieved in the context of ports. He said:

> It is in this context of global growth that we need to address the issue of ports and sustainability. Ports are usually located in coastal zone and have a special relationship with the ocean. An integrated coastal zone management often seeks to include a large portion of the ocean especially the shallow part of the continental shelf which forms a natural prolongation of the land-mass. The ocean and coastal space provide the majority of world's ecosystem which are critical to human survival.

In 2007, at the meeting of the United Nations Commission on Sustainable Development, an address was given by Mr David Edwards, Director, Technical Co-operation Division International Maritime Organization, in which he referred to sustainable development in a general manner, which similarly to previous examples was couched in terms of a policy statement. He said as follows: 'in the context of sustainable development, shipping is a very positive force, making a major contribution to global prosperity in a way that has only a relatively small negative impact on the global environment'. In general his presentation was mostly devoted to the considerable input of the IMO to the global protection of the environment and safety of maritime traffic, which are contributory factors to sustainable development.[91] The Resolution on the Promotion of Technical Co-operation adopted by the Legal Committee of the IMO, included the invocation of

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[90] B.A. Hamzah, 'Ports and Sustainable Development: Initial Thoughts', available online at: http://www.unitar.org/hiroshima/programmes/shs04/Presentations%20SHS/7%20July/Hamzah_doc.pdf (last visited on 10 July 2008).

[91] Commission on Sustainable Development – 15th session, 2007 Statement by the International Maritime Organization Presented by David Edwards, Director, Technical

this concept, without providing concrete details: '. . . affirmed that IMO's work in developing global maritime standards and in providing technical co-operation for their effective implementation and enforcement, can and does, contribute to sustainable development. . .'.[92]

In conclusion on the IMO and the application of sustainable development it may be said that the IMO is mindful of this concept and promotes its implementation. However, this concept within the structure of the IMO is treated as a policy statement which does not go into the details of its implementation. It may be argued, of course, that the myriad of conventions drafted within the IMO, aimed at safety of navigation, the protection of the environment and the promotion of development, various Codes of Conduct and Resolutions constitute a nexus contributing to the implementing of sustainable development by their very nature. It would be useful, however, if the IMO produced a document which set out the goals of sustainable development within this organization and the methods of implementation in a general and structured manner, rather than, as is done at present, through a piecemeal approach, based on political statements and various resolutions.

2. The Baltic Sea Area Environmental Protection and Sustainable Development

The 1992 Helsinki Convention on the Protection of the Baltic Sea Area does not in itself provide a sufficient picture of the problems relating to the implementation of sustainable development, or the role that the concept plays, in this area.

As early as in 1998, it was observed that the achievement of sustainable development faces many obstacles, such as incomplete legislation, weak enforcement of law, custom and certification problems, illegal trade, deficiencies in the taxation system and ineffective administration, especially in new democracies. On a national level both the integration of economic, environmental and social concerns by applying a holistic, long-term perspective and cooperation between sectors are insufficient. There is also the lack of well-defined goals in some sectors. The lack of knowledge and

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Co-operation Division International Maritime Organization. Available online at: http://www.un.org/esa/sustdev/csd/csd15/statements/imo_10may.pdf.

[92] International Conference on Liability and Compensation For Bunker Oil Pollution Damage, 2001, Agenda item 8LEG/CONF.12/18, 2001, Adoption of the Final Act and any Instruments, Recommendations, and Resolutions Resulting from The Work of the Conference. Available online at: http://www.igpandi.org/downloadables/submissions/imo/IMO%20LEG%2094%20Paper%20-%20October%202008.pdf.

awareness regarding sustainable development among private individuals and public authorities is the fundamental obstacle.[93]

However, practice evidences that the content of the concept of sustainable development as conceptualized and applied in the Baltic Sea Area is couched in concrete terms and refers to the system of management, in contrast to the practice of the IMO. The Council of the Baltic Sea States (the 'CBSS')[94] in 2003 adopted 'The Baltic States Declaration on Environment and Sustainable Development'.[95] This document, apart from the usual language, contains rather detailed (for such a type of declaration), guidelines on particular areas in which this concept should be implemented and in what manner. It went as follows:

> 1. In the context of the new opportunities in Northern Europe with the EU enlargement, environmental investments and the increasing close co-operation between the EU and the Russian Federation, we are determined to reinforce out efforts to promote sustainable development for the Baltic Sea Region. 3. We underline the importance of the further development and strengthening of the Northern Dimension (ND) policies of the European Union. The implementation of the second ND Action Plan 2004–2006 and the ND Partnership adds new opportunities for the environmental and cross-border co-operation in the Baltic Sea Region between the EU countries and the Russian Federation. The central role of water and the need for a special focus on consumption and production, including energy and transport has to be emphasised. The activities of different bodies in the region should contribute to the objective of attaining sustainable development in relevant sectors . . . 5. The Turku Forum on the 9–10 July emphasized the role of civil society in the sustainable development process and urged CBSS to reinforce Baltic 21.[96] We pledge to promote further civil society participation in environmental activities in the Baltic Sea region.

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[93] Agenda 21 for the Baltic Sea Region, *supra* note 104, at 10–11.

[94] The Council of the Baltic Sea States was established at a conference of the foreign ministers of Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Norway, Poland, Russia and Sweden and a member of the European Commission in Copenhagen in March 1992. Iceland joined the CBSS in 1995. The CBSS serves as an overall regional forum for intergovernmental cooperation, focusing on the need for intensified coordination of activities in virtually every field of government (with the exception of military defence, which is explicitly excluded as a potential area of cooperation in the Council's Terms of Reference) among the Baltic Sea States. CBSS Ministerial meetings have been held in the following fields: agriculture; children's affairs; culture, economic affairs; education; energy; finance; health; information technology; interior; justice; labour; social affairs; spatial planning; trade and industry; transport; youth affairs. CBSS meetings at the level of Directors General have been held in the following fields: border control, civil protection, customs, prosecutors-general, tax administration. Information is available online at: http://www.cbss.st/history/ (last visited on 10 July 2008).

[95] Senior Official Group (SOG) Nineteenth Meeting, Straslund, Germany, 23–24 October 2003, CBSS Ministerial Meeting, Luleå, 29 August 2003, Baltic Sea States' Declaration on Environment and Sustainable Development.

[96] The Baltic 21 is The Baltic Institute for Sustainable Industry consisting of research institutes, universities, companies, business associations and authorities, aiming to catalyse

The CBSS Ministerial Meeting specified the areas of particular importance in which sustainable development should play the most fundamental role. First, in view of the development of principle sustainable development, synergies and effective division of labour in the Baltic Sea, regional cooperation is encouraged. Cooperation between HELCOM and the Baltic 21 is also promoted in order to link sector policies and projects to the improvement of the Baltic Sea environment.

The CBSS invited all bodies to participate in a Baltic dialogue and to establish partnerships with a view to joint action to tackle existing and emerging environmental issues (paragraph 6 of the Declaration). As to the legal issues relating to the environment, in view of the enlargement of the EU, special attention should be paid to the harmonization of environmental legislation between the EU and the Russian Federation, also supporting the development of effective environmental management and making full use of monitoring systems in the European Union (paragraph 7 of the Declaration). The Declaration also stressed the importance of the environmental impact assessment in decision-making, taking into consideration the increasing investment activity around the Baltic Sea due to EU enlargement and increased economic activity. Therefore, transboundary effects must be considered (paragraph 8 of the Declaration). The Declaration also follows the postulates and aims of the 2002 Johannesburg Summit on Sustainable Development. One such aim is the improvement of water quality, which should become a focal point, with a view to improving human health. The Ministers of the Environment reiterated their commitment to the goals set at the World Summit, one of them being to halve by 2015 the proportion of people without sustainable access to safe drinking water and access to basic sanitation (paragraph 9). Further, the Ministers refer to the Johannesburg Plan of Implementation, which calls on all parties and stakeholders to follow effectively the implementation of Agenda 21 and the outcome of the World Summit on Sustainable Development. The Plan mobilizes regional and subregional bodies as part of this process. The practice of the Baltic Sea region should be reported to the United Nations Commission on Sustainable Development based on a two-year cycle. The Northern Dimension of the EU should be addressed in the EU follow-up to the Summit (paragraph 10). The Declaration contains other general postulates. The Ministers of the Environment called for further improved coordination and collaboration between the regional organizations and structures, in particular: the CBSS, Baltic 21, HELCOM, the Barents-Euro

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sustainable development of the industrial sector in the Baltic Sea region and bridging knowledge gaps between countries. See http://www.baltic21institute.org/ (last visited on 10 July 2008).

Arctic Council, the Arctic Council, the Nordic Council of Ministers and the Vision and Strategies Around the Baltic Sea ('VASAB'), and for the increased involvement of the European Union in the region (paragraph 35).[97] This Declaration is also linked with, or we may even say forms one system with, the 2003 Joint Bremen Declaration.[98] As already mentioned above, the water-related issues are at present the most pressing issues in the world (as evidenced by the Johannesburg Summit). This is also the situation of the Baltic Sea, where sustainable development of water management merited a whole part of the Declaration (Part I). In particular, the Ministers of the Environment deal with the problems of reducing pressure on the marine environment and combating the eutrophication of the Baltic Sea. In order to achieve these aims continued efforts must be made to invest in sewage treatment with the aim of covering all catchment areas, including St. Petersburg and the Neva area, and to develop and implement action programmes for pollution reduction by nutrients from agriculture, in order to diminish the impact on the surface and groundwaters, as well as on Baltic Sea (paragraph 11). A matter of utmost urgency is the development of the integrated water resources and coastal management and water efficiency plans by 2005, in accordance with the WSSD Plan of Implementation, with the assistance of the CSD (paragraphs 13 and 16). Another area in need of improvement is the enhancing of Baltic Sea maritime safety, due to increased transportation (especially ships transporting oil). Therefore the measures provided for in the HELCOM Copenhagen Declaration on the Safety of Navigation and Emergency Capacity in the Baltic Sea Area 2001 should be implemented (paragraph 14). The Declaration also stresses the importance of improving and managing the transboundary waters' national and regional strategies, plans and programmes, according to the schemes contained in the 1992 Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes (paragraph 15). The Declaration postulates the establishment of a well-managed and ecologically coherent network of marine protected areas to protect biological diversity (paragraph 17).

Another sector (Section II of the Declaration) which is particularly important for the implementation of sustainable development is energy. The Ministers of the Environment encouraged the Parties to the Baltic Sea

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[97] The VASAB is an intergovernmental programme at the ministerial level dealing with spatial planning and development in the Baltic Sea Region. See http://europa.eu.int/comm/ten/transport/revision/consultation/2003_09_10_vasab2010.pdf (last visited on 10 July 2008).

[98] Para 12: '[w]e are committed to implement the HELCOM and OSPAR Ministerial Declarations adopted on 25 June 2003 in Bremen, Germany'.

Region Energy Cooperation (the 'BASREC') to continue the reduction of environmental impacts while promoting the integration of the energy markets in the Baltic Sea Area and to aim at the removal of market distortion, thorough e.g. abolishing subsidies (paragraph 19). The Declaration referred in the field of energy also to the Johannesburg Declaration in order to encourage States to set targets for substantial increases in contributions to renewable energy sources as a proportion of total energy supply and progressively to introduce energy efficient technologies in each member country of the BASREC, as well as to recognize the need to use the vast potentials for bio-energy in the region by improving practice in the forestry, agriculture and energy sectors (paragraphs 20, 21 and 23). The Declaration also promotes the targets set by the Climate Change Convention and the Kyoto Protocol, in particular to set up within BASREC the flexible mechanisms in the Kyoto Protocol (paragraph 22).

Following the postulates of the Johannesburg Summit, the Ministers of the Environment aim at accelerating the shift towards sustainable consumption and production. Sustainable production and consumption will be a crosscutting issue, which will be considered in all sectors (Section III, paragraph 24). The Declaration is focused on the protection of human health and the environment from harmful chemicals, and to this end the use of the precautionary principle and the ratification and implementation of the Stockholm Convention on Persistent Organic Pollutants (the 'POPs' Convention) and the Rotterdam Convention on Prior Informed Consent (the 'PIC' Convention) are promoted (paragraph 25). The Declaration also promotes the use of clean transport and production methods. It also recommends the development of corporate responsibility and accountability as well as the exchange of best practices (paragraphs 26 and 27).

Part IV of the Declaration is on sustainable development and a sectoral challenge. This section of the Declaration laid down the fundamental rules on sustainable development as a sectoral challenge. First, the Ministers recognized sectoral integration and broad multi-stakeholder participation as major characteristics of sustainable development in the Baltic Sea Region, including action to be taken within the Agenda 21 process, which needs improvement (paragraph 28). Paragraph 29 lists the elements which will be reflected in the future work of and in the new mandate for Baltic 21.[99]

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[99] These elements are as follows:

'Consideration of the implications of the new Action Plan for the EU Northern Dimension in its work; enhancement of sectors minister's responsibility and strategic development of their work within Baltic 21; development of cross-sectoral approach and initiatives, taking into account relevant thematic clusters of the UN Commission on Sustainable Development (the "CSD") two year cycles; further development of co-operation with civil society and other stakeholders; application of precautionary approach with

The sectoral development also includes the promotion of programmes for sustainable agricultural production (with the assistance of Ministers of Agriculture) to protect biodiversity and the rural landscape, phasing out unsustainable subsidies, supporting organic production and avoiding the use of pesticides (paragraph 31). Fish stocks have to return to sustainable levels (paragraph 32) and forest management has to be on a sustainable level, taking into account biodiversity (paragraph 33).

Another crucial element of sustainable development, i.e. education, was also considered as one of the elements which has to be promoted, taking into account the gender perspective (paragraph 34).

3. An Agenda for the Baltic Sea Region (the 'Baltic 21')

The Baltic Sea region was the first region in the world to adopt common goals and actions for the introduction of sustainable development. An Agenda 21 for the Baltic Sea Region – Baltic 21 is an international process started by the Prime Ministers of the CBSS Member States in 1996. Baltic 21 has the objective of attaining sustainable development in the Baltic Sea Region. The Baltic 21 members include the 11 CBSS Member States, the European Commission, intergovernmental organizations, international networks of sub-regional and local authorities, international financial institutions and various other non-governmental organizations.[100] A new mandate period for the Baltic 21 started in 2004.

Agenda 21 for the Baltic Sea Region identified the following key points:

- The economic, social and environmental dimensions of sustainable development interact and are integrated;
- An equal distribution of wealth in the region is assumed;
- The region's carrying capacity is a limit to human activity; and
- The global context is taken into account, but the focus is on regional issues.[101]

The Baltic 21 approach emphasized in particular that 'sustainable development is a comprehensive and integrated concept and requires a unified approach covering all aspects of society, including the seven Baltic sec-

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particular attention to action and coordination, specially on a local level; reinforced effects of co-operation at project level, including developing Baltic 21 demonstration projects; increased co-operation with financial institutions and other regional bodies in order to make the process more effective and to promote synergies; exploration of possibilities for exchange of experiences with actors in other relevant regions, such as the Mediterranean region and the Black Sea.'

[100] See http://www.baltic21.org/ (last visited on 10 July 2008).

[101] *Ibid.*, at 11.

tors'.[102] Agenda 21 for the Baltic also stressed the time factor required to implement sustainable development policies.[103]

The main task of this programme is to implement Agenda 21 regionally. These goals are construed so as to include an overall goal, goals for each of eight Baltic sectors and a goal for spatial planning: the east–west responsibility axis, sector targets and sector implementation provide the basis for effecting the goals. Sector goals are based on the Vision of a Sustainable Baltic Sea Region 2030.

Baltic 21 is developing the practice of sustainable development in a 30-year perspective, from the point of view of three pillars of sustainable development: social, economic and environmental. Baltic 21 has set an overall goal for sustainable development in the Baltic Sea region. '[T]he essential objective of the Baltic Sea region cooperation is the constant improvement of the living and working conditions of peoples within the framework of sustainable development, sustainable management of natural resources and protection of the environment.'[104] The following are the goals for the development of sustainable development for the Baltic Sea region: a safe and healthy life for present and future generations; a prosperous economy and society for all; local and regional cooperation based on democracy, openness and participation; biological and ecosystem diversity and productivity is restored or maintained; pollution to the atmosphere, land and water does not exceed the assimilative capacity of nature; renewable resources are efficiently used and managed within their regeneration capacity; use of non-renewable resources is made efficient and cyclic and renewable substitutes are created and promoted; awareness of the elements and processes leading to sustainability is high among different actors and levels of society. The work of the programme is focused on seven economic sectors: agriculture, fisheries, energy, forests, industry, tourism and transport, in addition to spatial planning and education.

Both the agreed goals and the Action Programme for Sustainable Development constitute Agenda 21 for the Baltic Sea Region. The Agenda is based on seven sector reports and other background reports: spatial planning, financing options, indicators and scenarios. The Action Programme comprises three parts: actors (issues concerning several sectors), priority demonstration areas and pilot projects. In general terms the following

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102 *Ibid.,* at 14.

103 *Ibid.,* at 16.

104 'About Baltic 21, Background, objectives, goals, strategy and actors', available online at: http://www.baltic21.org/?about (last visited on 10 July 2008). See also 'An Agenda 21 for the Baltic Sea Region-Baltic 21', adopted at the 7th Ministerial Session of the Council of the Baltic Sea States, Nyborg, 22–23 June 1998, available online at: http://www.baltic21.org/attachments/b21_main_report__no._1_98____english.pdf.

constitutes the core of the Action Programme: institution strengthening, structural changes, education, exchange of experience and other nontechnical initiatives.

Education, a very important element of sustainable development, plays a crucial role in Baltic 21. In 2002, the Ministers for Education from the CBSS countries adopted Baltic 21E, which is an Agenda 21 for education in the Baltic Sea region. Baltic 21 has a duty to report to the Prime Ministers approximately at five-year intervals for consideration and decision on whether any action is required.

Baltic 21 will achieve this goal through the implementation of a four-pronged strategy:

1. It will support the CBSS and its processes in the pursuit of sustainable development, especially to promote the integration of sustainable development into regional policy-making.
2. Sectors and Spatial Planning will step up involvement in cross-sectoral work and will jointly strive towards achieving the agreed goals. This will take effect through multi-sectoral and multi-stakeholders' cooperation.
3. It will adopt and act as the umbrella for the set of so-called 'Lighthouse Projects' established to demonstrate sustainable development in action. These projects will be earmarked to ensure high visibility and to secure the participation of many countries and sectors and ensure a value-added contribution to regional sustainability.
4. It will identify funding sources in order to support the Lighthouse Projects and other regional sustainable development initiatives.

Seven of the Baltic 21 sectors have common general issues (or policy implications) concerning the implementation of sustainable development in the Baltic Sea Region.[105] They are, *inter alia,* as follows: the strengthening of current democratic processes; the need for an enhanced national and regionally harmonized regulatory framework in the region in which sustainability was clearly incorporated; the wide incorporation of the precautionary principle and the polluter-pays principle in the region; the further integration of economic, social and environmental aspects in sectoral planning; increased public awareness of the need for sustainable development and a change towards sustainable consumption; the wider use of spatial planning instruments; increase in regional activities, transfer of knowledge, technologies and resources including training, within the

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[105] *Supra* note 104.

framework of bilateral, multilateral and other cooperation or assistance further towards supporting the Baltic 21 Action Programme; increased regional cooperation through the establishment of regional structures, such as common energy markets, common transport policies and the coordination of activities between authorities (the development of harmonized environmental legislation and taxes is necessary).[106]

Finally, the Agenda 21 for the Baltic Sea Region – Baltic 21 presented an overview of the general postulates on the implementation of Baltic 21 and the Action Programme. The main actors which bear responsibility for the implementation are the governments, relevant sectors and the EU. However, it is rightly noted that the governments cannot be the only responsible entities, but the whole society, all the stakeholders, have to be involved. The important, in fact the decisive, role to be played rests on intergovernmental organizations. In particular, HELCOM, VASAB, IBFSC and the IFIs are singled out. However, NGOs are also crucial partners in the implementation of sustainable development in this region. These include scientific, environmental and industrial organizations, networks and sub-regional and national organizations. The role of governments is to encourage and promote such participation. Of great importance is the role of the Baltic Sea region municipalities and other local communities. It must be observed in particular that BLA21F, the UBC, the Coalition Clean Baltic (the 'CCB') and the Baltic Sea States Sub-regional Co-operation (the 'BSSSC') are in the forefront of the implementation and the promotion of the sustainable development programme. The Prime Ministers of the Baltic Sea Region started Baltic 21 and they should maintain the steering role and review the Programme on a regular basis (approximately on a five-yearly basis). Likewise, the role of the sectoral and environmental ministers is stressed, and they should consider the progress made every second or third year (with the possible participation of foreign ministers). Baltic 21 also emphasizes the role of the Senior Official Group (the 'SOG') and its Bureau.[107]

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[106] Agenda 21 for the Baltic Sea Region, *supra* note 104, at 14–16.

[107] The proposed terms of reference for the SOG were as follows: coordination and steering of the implementation of the Baltic 21; it should consist of representatives of the participating governments, including the EU, lead parties, as well as the relevant IGOs, NGOs and IFIs; the presidency of the SOG should rotate between the countries and the EU, on the basis of a two-year period; the SOG may decide its own procedure; decisions of the SOG should be adopted by consensus; the SOG should work on an efficient basis (to avoid duplications, gaps in work, etc.); the SOG should ensure that the BALTIC 21 process is transparent, democratic and participatory; the SOG should ensure that issues such as raising public awareness and measurable goals are addressed; the SOG may establish working groups for specific tasks (terms of reference of such groups will be decided by the SOG); the SOG should in principle meet on an annual basis; the SOG should facilitate co-ordination of work and exchange of

In 2004, the Baltic 21 Action Programme was reviewed after the first five years of its work, in the light of the impending renewal of its mandate by the Prime Ministers of the Region. Baltic 21 issued a report entitled 'Five Years of Regional Progress Towards Sustainable Development. Baltic 21 Report to the Prime Ministers of the Baltic Sea States',[108] assessing the past achievements in the first period of the existence of Baltic 21. In the intervening years many events occurred which had a fundamental influence on the progress of the implementation of sustainable development in this region. First, Baltic 21 took into account many postulates of the World Summit in Johannesburg.

Other developments involve: the recent enlargement of the European Union, which means that the EU's involvement will increase significantly and that cooperation with Russia will be enhanced; Baltic 21 increased its cooperation with other than governments multi-stakeholders, such as NGOs and networks; as to the sectoral implementation of sustainable development, the next five years should be focused on resource allocation from the Sectors and increased stress on cross-sectoral initiatives which will better address the three dimensions of sustainable development, with the focus on fewer tasks, which 'are larger, bolder, and likely to produce tangible results that are visible in the region'.[109]

The period between 1998 and 2004 was characterized by a very varied level of implementation of sustainable development in different sectors: in some areas progress was very fast and in some extremely slow. However, 'in all cases, a good foundation has at least been laid for continued efforts to enhance sectoral and cross-sectoral initiatives toward sustainability goals within the region'.[110]

The Report assesses the five-year period in the following sectors: agriculture; education; energy; fisheries; forestry; industry; tourism; transport; and spatial planning. Further, the Joint Action Theme was analysed in the following areas: Regional Forums and Networks for Sustainable Development ('Joint Action 2'); Demonstration Areas and

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information with other international organizations of relevance to the Baltic 21; the SOG should adopt a bi-annual report on the progress of implementation of the Baltic 21 and report to the sectoral and environmental ministers every second or third year; the SOG should adopt a report to Prime Ministers approximately every fifth year for consideration and for a decision on any changes or additional action required. Those reports should include a review of the progress of fulfilling the set goals and the implementation of the action programme, based on an agreed follow-up system; The SOG should decide on countries or international organizations to become the lead parties for the Baltic 21 sectors.

[108] Baltic 21 Series No. 1/2004, available online at: http://www.baltic21.org/attachments/report_no_1_2004__5_year_report_to_prime_ministers.pdf (last visited on 10 July 2008).

[109] *Ibid.*, at 3.

[110] *Ibid.*, at 5.

Pilot Programmes ('Joint Action 3'); Cooperation among cities for Sustainable Development ('Joint Action 4'); Sustainable Technology Procurement ('Joint Action 5'); Information for Sustainable Development ('Joint Action 6'); Increasing Consumer Awareness ('Joint Action 7').

As regards *agriculture,* work on the Virtual Institute on Sustainable Agriculture has been started. The Nordic Council of Ministers provided the funding for the period 2002–2004. Poland started a similar initiative with the Virtual Institute for Sustainable Agriculture (the 'VISA'), the participants in which come from the Baltic 21 countries. In 2003, the Sector of Agriculture established the 'Task Force Sustainable Agriculture' (the 'TFSA'). Furthermore, inter-sectoral cooperation was initiated with the Tourism Sector. A close collaboration was established between the Global Environmental Facility (the 'GEF') and HELCOM.

In the area of *education*, the National Action Plans for sustainable education were created and several other initiatives, such as the review of national frameworks for education, the development of a network website and training materials; the development of a plan by a cross-sectoral training initiative together with the Agricultural Sector were accomplished; a project was initiated on the development of and research on education for sustainable development; and the development of in-service teacher training. The sector of *energy* has proved to be a success from the point of view of sustainability. The increase in the percentage of energy from renewable and natural gas and decreases in energy intensity and in key pollutants (such as carbon dioxide) were observed. The Baltic Sea Region Energy Corporation (the 'BASREC') is the leader in this Sector on behalf of the Baltic 21 Action Programme. The Nordic countries, the Nordic Council of Ministers and the Synergy Programme of the EU mainly financed the introduction of sustainability in this sector. BASREC was engaged in the following activities: a continuing dialogue and activities with respect to the regional integration of electricity and gas markets; cooperation in energy deficiency; climate change; and the task force on bioenergy. One of the main tasks of BASREC is to develop the Baltic Sea Region to be a testing ground for the Kyoto flexible mechanisms. BASREC will continue its efforts until 2005. The *fisheries* sector benefited from the work on the IBSFC. Due it its efforts in the application of the ecosystem-based approach to fisheries management, there is noticeable habitat restoration and wild salmon recovery in some of the Baltic rivers. It may also be observed that the controlled catches of pelagic fish at relatively high levels appear to be sustainable, and significant reductions in the Baltic Sea cod fisheries can be noted (however, cod fisheries still need to be within safe biological limits). An improved aquaculture technology may be observed. *Forestry* is one of the very successful sectors. The cross-sectoral cooperation is fruitful and it resulted in the introduction

of sustainability into private forest management; bioenergy production, forest management and chain of custody schemes, marketing and communication projects for wood products from sustainably managed forests, and related research and analysis projects. Another successful sector was *industry*. A task force was established which received significant funding from the Government of Sweden. Environmental Management Systems were introduced and business cooperation throughout the Region was initiated. The Task Force oversaw 30 projects such as environmental permits; chemical management; green technology transfer; eco-efficiency best practices; business-to-business collaboration on the development of new industries (biofuels and green product development, collaborative research and 'industrial match making' through a virtual network, the Baltic 21 Institute). As far as *tourism* is concerned, a task force was established and several conferences and meetings were organized on the subject of sustainable tourism development, rural tourism and eco-tourism. A new project of a network of tourism stakeholders was initiated. An agreement was reached to establish a clearing house of the information on sustainable tourism. A system to monitor coastal region sustainable tourism was developed in Germany. In Denmark, Germany, Latvia, Lithuania and Sweden sustainable labelling of tourism destinations was started (Denmark: 'Destination 21'; Germany: 'Viabono'; Latvia and Lithuania: 'Green Certificate'; Sweden: eco-label 'Nature's Best'). Sustainable *transport* has also achieved certain sustainability. Environmentally oriented systems of maritime transport are being developed. For example, the Latvian Ministry of Transport has completed a study on progress in Short Sea Shipping (the 'SSS'). The Baltic Ports Organisation (the 'BPO') has contributed to promoting short sea shipping through the Baltic 21 SSS survey conducted by the Port and Maritime University of Gdansk. Germany has undertaken to conduct a study of the implementation of Agenda 21 in European seaports and the UBC is implementing the 'New Hansa of Sustainable Port and Cities' project. Sustainable spatial planning, which was coordinated by the VASAB through numerous joint regional projects and planning activities, in such varied subjects as linking ports to the hinterlands, creating a Baltic Sea Region Coastal Integrated Management Zone (the 'CZM') Platform, as well as capacity building on spatial planning is very successful. Most importantly a set of principles on sustainable development in relation to spatial planning was established.[111]

The Joint Action Theme also has some outstanding accomplishments. *Joint Action 1, i.e.* Bioenergy and Renewable Energy, was covered exten-

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[111] *Ibid.*, at 5–7.

sively by the energy sector in conjunction with other sectors. *Joint Action 2, i.e. Regional Forums and Networks for Sustainable Development* is based on several formal (such as Baltic Local Agenda 21 Forum) and informal networks (such as sustainability oriented investors and entrepreneurs) operating throughout the region in almost all sectors. Therefore, Joint Action works both inside and outside the Baltic 21 structure. *Joint Action 3, i.e. Demonstration Areas and Pilot Programmes*, is at the preparatory stage of collecting information on already existing and planned demonstration and pilot projects for each sector, with the specification of those with a cross-sectoral character. *Joint Action 4, i.e. Cooperation among Cities for Sustainable Development* is conducted through the UBC. The network, which is already functioning, comprises 11 specific cooperation projects, which connected cities as well as international agencies and organizations, which support the local Agenda 21 projects. Seventy-five per cent of regional cities which are members of the UBC also took part in sustainability related meetings, seminars and conferences and projects. *Joint Action 5, i.e. Sustainable Technology Procurement*: Baltic 21 acting through the Industry Sector Task Force, first analysed the main factors influencing sustainable technology procurement in the Baltic Sea Region from the political, economical and technical points of view. It identified the key sustainable technologies in the area of energy, water and transport, relevant to the local feasibility study. The second stage will be a full feasibility study of mechanisms to promote the procurement of sustainable technologies in the Baltic Sea Region. *Joint Action 6, i.e. Information for Sustainable Development* is based on the transparency and availability of the information. Baltic 21 issued two integrated assessments of sustainable development trends in the Baltic Sea Region and made available on its website documentation relevant to sustainable development in the Baltic Sea Region. The website offers full transparency as regards all sustainable development (including information on partnerships and funding) related projects, with their shortcomings and weaknesses. *Joint Action 7, i.e. Increasing Consumer Awareness* is implemented through the Baltic Local Agenda 21 Forum and comprises five projects (two of them in Russia). The aim of these projects is to raise awareness and increase involvement as regards both the local and national level sustainability initiatives. These projects are particularly successful in new EU Member States and also in St. Petersburg. Citizens and civic officials are involved in such projects as the EU environmental policy; local environmental planning, local participation on the decision-making process and environmental education.[112]

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[112] *Ibid.*, at 7.

In 2004 at the Baltic Sea Summit of the CBSS in Estonia, Baltic 21 was reviewed in the light of granting the new mandate. The main points of the new mandate are as follows. First, the need for Baltic 21 to act more closely with the CBSS is emphasized.[113] Baltic 21 will adopt and act as an umbrella for a set of high visibility new projects, encompassing as many state and non-state participants as possible. These are the so-called 'Lighthouse Projects' in order to demonstrate sustainable development in action. These projects will differ from the pilot projects, as they will focus on a few specific areas. Unsuccessful pilot projects in the Action Programme should be discontinued. In the light of the above, Baltic 21 will develop a special funding mechanism (the 'Baltic 21 Fund') to finance the Lighthouse Projects as well as other regional initiatives.

Interesting and straightforward views in relation to the obstacles to sustainable development in the Baltic Sea Region were presented at the Heads of Delegations Meeting of HELCOM in 2004 in summing up the Conference in Riga, Latvia, to commemorate the thirtieth anniversary of the Helsinki Convention.[114] The effort should be made to avoid overlapping, and despite a successful multi-stakeholder approach to it in the Baltic Sea Region, there is too much 'conversation' instead of 'conservation'. The Conference also stressed a 'performance gap' (a common shortcoming), i.e. a lack of the commitment exhibited by the governments as regards political decisions adopted by them and the difficulties in relation to implementation caused by the complexity of the task. One of the most important obstacles for the implementation of sustainable development is the lack of decisions adopted by HELCOM which are legally binding on States.

However, it must be emphasized that the Conference identified many very positive features of the Baltic sustainable development process. The growing involvement of the CBSS and of the Baltic Sea Parliamentary Conference (the 'BSPC') in this process and their commitment to the protection of the environment and in the case of the BSPC its contribution to the work of HELCOM are very important. The Conference further stressed the importance of the cooperation of all relevant Baltic Sea Region organizations aimed at making the Second Northern Dimension Action Plan successful in order to stimulate sustainable economic growth and increased welfare in Northern Europe. The Conference positively appraised the input

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[113] The SOG proposal specified that the SOG officials will act as a sustainable development think-tank for the CBSS; 'A New Mandate for the Baltic. Report of the ad hoc Working Group on Policy and Strategy II to the SOG', available online at: http://www.baltic21.org/Meetings/new/wgps_2/pdf/WGPS%20II%20Report%20to%20SOG-draft%203%20(03-01-04).pdf (last visited on 10 July 2008).

[114] http://sea.helcom.fi/dps/docs/documents/Heads%20of%20Delegation%20(HODS)/HODS%2015%202004/2-1.pdf (last visited on 10 July 2008).

of Baltic 21 to the process of sustainable development in the Region and its closer cooperation with Russia, as well as joint projects with HELCOM, such as tourism. International financial institutions are very heavily involved in this process and contributed in a very significant manner to the eradication of many of 20 'hot spots'. As of 1 January 2005, three Baltic States became the owners of the Nordic Investment Bank (the 'NIB'), which is a kind of 'in-house' bank for the Baltic Sea Region. Finally, it was stressed that NGOs are very active and valuable in the process of sustainable development in the Region. It was particularly stressed that the WWF had launched a 'Baltic Ecoregion Programme', based on thorough biodiversity and socio-economic assessments.

As may be seen from the above, all the documents regarding sustainable development in the Baltic Sea Area context presented a fairly detailed set of plans and programmes for its environmental protection and economic development, not full of empty slogans but offering concrete methods of achieving certain targets, which will lead to sustainability. It is notable, however, that they refer very infrequently to any of the elements of sustainable development, as listed in the Rio Declaration: intergenerational equity; common but differentiated responsibilities, the precautionary principle, etc. This indicates, in the view of the present author, that a certain evolution in the practical understanding of the concept of sustainable development has taken place (at least as regards the Baltic Sea region), i.e. it is focused on concrete tasks. It may also mean, however, that any plan and programme regarding the environment and development may be labelled 'sustainable development'. This may lead to so many variations of the concept that eventually it loses any distinct meaning at all. It may be added, however, that the 2007 Baltic Action Plan, which is based on the ecosystem approach, does not specifically rely on the concept of sustainable development, which may indicate a certain change from overarching practice to include in all initiatives this concept in order to give them more prominence.

IV. CONCLUSIONS

The theoretical nature of the concept of sustainable development is as elusive and vague at present as it was at its inception. As Marie-Claire Cordonier Segger and C.G. Weermantry surmise:

> This vagueness may well have been deliberate, in order to ensure its acceptability to many different local and global perspectives, from many cultures and regions. However, the lack of conceptual clarity, coupled with obstacles from

> many powerful economic interests groups, has made quite difficult to implement sustainable development in international policy and especially, in binding international law. The time has come to seek greater clarity . . . Clarity is now urgently needed. Clarity is needed to help to avoid or resolve bewildering conflicts and overlap between economic, environmental and social treaties. Clarity is needed to make implementation of international law possible, in many treaties and regimes that set sustainable development as an object or purpose. And clarity is needed to provide judiciaries, in domestic courts and international tribunals, with guidance to resolve disputes in the area.[115]

It appears that the clarity of the concept has not been achieved. Its content is vague and some of its components are equally ill-defined. The importance of the element of environmental protection in the core principle of integration has diminished, and primary importance was accorded to economic development. Therefore, many of the Principles of the 1992 Rio Declaration as regards sustainable development remain aspirational and the concept of sustainable development, as it was conceived by the Brundtland Commission, has certainly changed (although it has not been noticed or acknowledged in literature on the subject). The lofty components of this concept have no or little practical importance and cannot serve as guidelines for the implementation of this concept for, e.g., industry. As appears from the above examples of the application of sustainable development at the Baltic Sea regional level, it is based on a managerial approach, which has nothing in common with the elements of sustainable development commonly acknowledged in literature and listed in the Rio Declaration. At least as regards its implementation in the Baltic Sea Area, it acquired the character of a *chapeau*, by which all issues regarding the management, development and environmental protection of the area are covered. To a lesser degree, an example of the application of this principle in the IMO appears to indicate that there is a certain change towards a more concrete approach, although in a rather general and unstructured manner.

As demonstrated above, the concept of sustainable development has been the subject of lengthy and often inconclusive debates. However, the example of its application within the Baltic Sea area clearly indicates that practical reliance on this concept has nothing or very little in common

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[115] M.-C. Cordonier Segger and C.G. Weermantry, 'Introduction to Suitable Development: Implementing International Sustainable Development Law', in M.-C. Cordonier Segger and C.G. Weermantry (eds), *Sustainable Justice: Reconciling Economic, Social and Environmental Law* (2005) 1, at 3. See also B. Simma, 'Foreword', in N. Schrijver and F. Weiss, *International Law and Sustainable Development: Principles and Practice* v, at vi (2004), who is of the view that it was perhaps 'the very lack of conceptual rigor which permitted the entire world to embrace it'.

with a general theoretical discussion. The attempts made within the IMO to refer to this concept in more abstract terms, in the view of the present author, did not give rise to any tangible results and amounted to no more than lip service to sustainable development. The concrete application of this concept within the Baltic Sea region indicates perhaps the right way to approach the study of sustainable development and the need to analyse it on a case-by-case basis. It appears that future and continuing discussions of the theoretical background of sustainable development will not be fruitful and will remain largely inconclusive.

The Baltic Sea sustainable development programme drawn up in Agenda 21 may serve as a blueprint for other regional seas. This programme deals with all the pertinent issues relating to the successful application of sustainable development in the area. Within the general, political framework of democratic governance, Agenda 21 adopted a sectoral-specific approach, which set the goals for particular areas of industry and economy. It also accorded a very prominent place to education and succeeded in bringing together all stakeholders, States, Non-Governmental Organisations and civil society. The programme also secured the participation of financial institutions in order to ensure the implementation of Agenda 21, and in doing so put special focus on the development of public–private partnerships.

Mechanical listing of the elements of sustainable development which are based on the 1987 much-used Brundlandt's definition neither furthers the understanding of the concept nor shows its practical working in contemporary world. However, many current publications are still focused on this clichéd definition, which had currency in 1987, but nowadays requires a more detailed approach. Such an approach would provide certain guidance for States and civil society on how to apply this concept at both international and national levels. Very general references to sustainable development in the jurisprudence of international courts and tribunals are of no significant importance to its further understanding. The mention of this concept in the 1997 *Gabcikovo-Nagymaros* case by the International Court of Justice, although laudable, did not contribute to its further evolution. Attempts by the Court to couch this concept in more detailed terms in the Order relating to the *Pulp Mills* case were still rather general and did not bring any new dimensions into this notion. The references to 'shared natural resources' and the necessity of the securing of the 'livelihood' of people are phrases which are not novel.

The Arbitral Tribunal in the 2005 *Iron Rhine* case relied on the 1997 *Gabcikovo-Nagymaros* case, thereby focusing on generalities of the concept. However, as was mentioned, at least it made an original attempt to link this concept with the question of significant harm, as an element

restricting sustainable development. As a general trend, however, it may be observed that thus far international jurisprudence contributed very insignificantly to the development of this concept and referred to it only in very general terms.

The aims, functions and the institutional structure of sustainable development have to be individually tailored to specific needs and characteristics of each relevant activity and each geographical region, as exemplified by the Baltic Sea cooperation. Such cooperation aimed at the furthering and practical application of sustainable development is one of many examples which can also be found in other international areas, as e.g. in relation to cooperation concerning international watercourses. Water cooperation established within the Southern African Development Community (SADC) sets very well defined and precise aims which do not rely on general terms which would be of little or no use in any specific situation, based on the 2000 (Revised) Protocol.[116] First of all the 2000 Protocol constitutes part and parcel of a greater institutional structure i.e. the Regional Strategic Action Plan ('RSAP'), through which it was implemented and was integrated into the overall objectives of SADC, and also is connected with other programmes of the region concerning food, agriculture and natural resources. Only in its Preamble does the Protocol refer in general terms to sustainable development.[117] This is followed by a very specific, concrete plan, the structure of which resembles to a great degree the approach adopted for the Baltic Sea Area. In order to achieve the aim of sustainable development, the Protocol set the list of very

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[116] The first Protocol was established in 1995. The 2000 Protocol entered into force in 2003 and covers 14 countries members of the Southern African Development Community: Angola, Botswana, The Democratic Republic of Congo, Kingdom of Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. The text of the Protocol is available online at: http://www.sadc.int/english/documents/legal/protocols/shared_watercourse_revised.php.

[117] It refers to the concepts of sustainable development, sustainable utilisation of shared resources and environmentally sound management, as reflected by Agenda 21. It relies on three pillars of sustainable development, as it reads as follows: '[c]onvinced of the need for co-ordinated and environmentally sound development of the resources of shared watercourses in the SADC Region in order to support sustainable socio-economic development' (Preamble). Art. 1 para 1 (i) explains that 'management of a shared watercourse means planning the sustainable development of shared watercourse and providing for the implementation of any plans adopted; and (ii) otherwise promoting the rational, equitable and optimal utilisation, protection and control of the watercourse'. The main objective of the Protocol outlined in Art. 2 is undoubtedly the expression of the concept of sustainable development: '[t]he overall objective of this Protocol is to foster closer cooperation to judicious, sustainable and co-ordinated management, protection and utilisation of shared watercourses and advance the SADC agenda of regional integration and poverty alleviation'.

detailed and concrete objectives[118] which were translated into tangible projects, such as ADC Shared Watercourses Support Project for Buzi (Mozambique/Zimbabwe), Ruvuma and Save River Basins (Tanzania/ Mozambique) on the basis of the Revised Protocol.[119] The project covers the three river basins and addresses three areas identified in SADC's Regional Strategic Action Plan for Integrated Water Management and Development (RSAP-IWRMD): surface waters assessment/management; groundwater assessment/ management; and capacity building. The RSAP/ IWRMD is an integral part of the Revised Protocol. Therefore, it can be said that the Protocol provides an adequate legal structure enabling the realization of the concept of sustainable development, which in fact is the main objective of this instrument. The RSAP is included in the SADC Regional Indicative Strategic Development Plan (RISDP), which is a blueprint for regional integration and cooperation. The goal of the Project is the fostering of sustainable development by way of the development of integrated water resources management and related physical infrastructure development, which further regional integration and poverty reduction. The Project objective is to ensure a sustainable framework for the integrated planning and management of shared water resources in the three rivers basins and to support the livelihoods of the local communities.

The continuing reliance on clichéd and worn out definitions should be abandoned and the concept (or principle) of sustainable development must acquire a tangible and concrete content, as in the cases of the Baltic

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[118] '(a) promote and facilitate the establishment of shared watercourse agreements and Shared Watercourse Institutions for the management of shared watercourse; (b) advance the sustainable, equitable and reasonable utilisation of the shared watercourses; (c) promote a co-ordinated and integrated environmentally sound development and management of shared watercourses; (d) promote the harmonisation and monitoring of legislation and policies for planning, development, conservation, protection of shared watercourses, and allocation of the recourses thereof; and (e) promote research and technology development, information exchange, capacity building, and the application of appropriate technologies is shared watercourses management'. Art. 3 (General Principles), para. 4 states explicitly that 'State Parties shall maintain a proper balance between resource development for a higher standard of living for their people and conservation and enhancement of the environment to promote sustainable development'. Like the 1997 Convention, the SADC Protocol is based on the principle of sustainable and reasonable utilization. However, interestingly, the Protocol integrated the principle of equitable and reasonable utilization with that of the protection of the riparian environment, which is a new and very important development, as it combines elements of watercourse management which were considered to be incompatible.

[119] See e.g. Multinational SADC Shared Watercourses Support Project for Buzi, Save and Ruvuma River Basins, test available online at: http://www.afdb.org/pls/portal/docs/PAGE/ADB_ADMIN_PG/DOCUMENTS/OPERATIONSINFORMATION/SADC%20WATER%20ENG%2025%2001%202006.PDF.

Sea and the SADC cooperation. Otherwise this concept will continue to deserve appraisals such as the following:

> Sustainable development is political fudge: a convenient form of words, prompted, though not invented, by the Brundtland Commission, which is sufficiently vague to allow conflicting parties, factions and interest to adhere to it without losing credibility. It is an expression of political correctness which seeks to bridge the unbridgeable divide between the anthropocentric and biocentric approaches to politics . . . It is a sham. Sustainable development, with its anthropocentric underpinning and inherent contradictions, must go.[120]

> The role of international law in furthering the aims of sustainable development must be strengthened in providing a 'concrete regulatory framework for co-operation between an action by all relevant actors, and the monitoring thereof'.[121]

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[120] D. Richardson, 'The Politics of Sustainable Development', in S. Baker *et al.* (eds), *The Politics of Sustainable Development: Theory and Practice within the European Union* (1997) 43, at 43, 57 and 58.

[121] Schrijver, *supra* note 1, at 385–386.

3. Intergenerational equity: a reappraisal

I. THE THEORY OF INTERGENERATIONAL EQUITY – INTRODUCTION

There are very few topics of international law and environmental law which have given rise to such an invigorating discussion and division of views as the concept of intergenerational equity. It may be said as well that the relationship between generations has been a fertile ground for philosophical debate.[1] It must be observed from the outset that the question of environmental protection and intergenerational trusts was analysed in depth by Professor Redgwell in her seminal book.[2]

[1] See J. Rawls, *A Theory of Justice* (1971) (hereinafter Rawls I); J. Rawls, *A Theory of Justice* (revised edn, 1999) (hereinafter Rawls II); J. Rawls, *Political Liberalism* (1996) (hereinafter Rawls III); B. Barry, 'Justice Between Generations', in P.M.S. Hacker and J. Raz (eds), *Law, Morality and Society: Essays in Honour of H.L.A Hart* (1979) 268, at 268–84 (hereinafter Barry I); B. Barry, *Theories of Justice – A Treatise on Social Justice* (1989) (hereinafter Barry II). The philosophical theories relating to relationships between generations were the subject of a seminar on this subject organised by Loyola Law School, Los Angeles, California. The seminar was mainly devoted to philosophical issues relating to intergenerational equity. The essays were published in 35 *Loyola Los Angeles Law Review* (2001–2): L.B. Solum, 'To Our Children's Children's Children: The Problems of Intergenerational Ethics', 35 *Loyola Los Angeles Law Review* 163, at 163-322 (2001/2002); A.P. Grosseries, 'Do we Owe to The Next Generation (s)', 35 *Loyola Los Angeles Law Review* 293, at 293–355 (2001/2002); C. Bazelon and K. Smetters, 'Discounting in the Long Term', 35 *Loyola Los Angeles Law Review* 277, at 277-291 (2001/2002); Th. P. Seto, 'Intergenerational Decision-Making: An Evolutionary Perspective', 35 *Loyola Los Angeles Law Review* 235, at 235–276 (2001/2002). See also B.M. Fischmann, 'Some Thoughts on Shortsightedness and International Equity', 36 *Loyola University Chicago Law Journal* (2005) 457, at 457–67; W. Beckerman and J. Pasek, *Justice, Posterity, and the Environment* (2001); J.C. Tremmel (ed.), *Handbook of Intergenerational Justice* (2006), in particular the following chapters: D. Birnbacher, 'Responsibility for Future Generations-Scope and Limits' at 21, 21–39; C. Lumer, 'Principles of Generational Justice', at 39, 39–53; C. Dierksmeier, 'John Rawls on the Rights of Future Generations' at 72, 72–86; M. Wallack, 'Justice between Generations: The Limits of Procedural Justice' at 86, 86–106; W. Beckerman, 'The Impossibility of a Theory of Intergenerational Justice' at 53, 53–72. See also L.M. Collins, 'Revisiting the Doctrine of Intergenerational Equity in Global Environmental Governance', 30 *Dalhousie Law Journal* (2007) 79, at 79–141.

[2] C. Redgwell, *Intergenerational Trusts and Environmental Protection* (1999). She also presents a critical analysis of the theory of Professor Brown Weiss.

However, there have been certain recent developments in national law which merit new research, such as the establishment of the Commission for Future Generations in Israel. This chapter also analyses the little-known legal settlement of the claims which arose from the Nuclear Testing Programme conducted by the United States in the Marshall Islands. These claims resulted in the establishment of the Nuclear Claims Tribunal, which tackles the intergenerational aspect of law, since it takes into account unborn generation when judging cases.

The fate of future generations as well as the notion of keeping our planet in trust for future generations are not new ideas. Many international environmental agreements, drafted many years ago,[3] as well as soft-law documents, include, at least in the Preamble, the invocation of future generations.[4] The concept of trust as applied to natural resources in relation to future

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[3] See, e.g., 1946 International Convention for the Regulation of Whaling, 161 UNTS 72: 'The Governments . . . *Recognising* the interest of the nations of the world in safeguarding for future generations the great natural resources represented by the whale stocks . . .'.

[4] See, e.g., the 1979 Bonn Convention on the Conservation of Migratory Species of Wild Animals, 19 ILM (1980) 15:

> 'The Contracting Parties . . . *Aware* 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 utilised, is used wisely . . .;'

Convention on International Trade in Endangered Species of Wild Flora and Fauna, 12 ILM (1973) 1085:

> '*Recognising* that wild fauna and flora in their many beautiful and varied forms are an irreplaceable part of the natural system of the earth which must be protected for this and the generations to come . . .;'

The 1979 Berne Convention on the Conservation of Migratory Species of Wild Animals, 19 ILM (1980) 15:

> '*Recognising* that wild fauna and flora constitute a natural heritage of aesthetic, scientific, cultural, recreational, economic and intrinsic value that needs to be preserved and handed to future generations . . .';

Principle 2 of the 1972 Stockholm Declaration on Human Environment, 11 ILM (1972) 1416:

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

The 1992 Rio Declaration on Environment and Development, Principle 3, 31 ILM (1992) 874:

> 'The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations'.

generations was pleaded in the 1893 *Pacific Fur Seal Arbitration*[5] over alleged over-exploitation by Great Britain of fur seals beyond the limits of national jurisdiction. This arbitration concerned many very difficult legal questions relating, *inter alia,* to the right of a State (in this case the right of the United States) to regulate the protection of seals beyond the three-mile limit. The Arbitral Tribunal rejected such an assumption; however, it adopted a regulation which included measures to manage fur seals outside such a limit. The US put forward an interesting argument that protection of fur seals outside the three-mile limit was justified according to 'established principles of the common and civil law, upon practice of nations, upon the laws of natural history, and upon the common interest of mankind'.[6] Moreover, it argued that property rights were not unlimited, as nations 'are not made the absolute owners; their title is coupled with a trust for the benefit of mankind. The human race is entitled to participate in enjoyment.'[7] The US put forward a very modern concept of 'the common property of mankind' which, if a State withdraws it, results in the State losing the trust of other States, and which gives the right 'to interfere and secure their share'.[8]

II. THE PHILOSOPHICAL BASIS OF THE THEORY OF PROFESSOR BROWN WEISS

The relationship between generations is a subject of intergenerational ethics.[9] Such ethics, which are very difficult in moral and political philosophy, are of paramount importance to, for instance, environmental policy, health policy, intellectual property law, social security policy and telecommunications policy. Concrete examples of the application of intergenerational ethics can be found, as Solum notes, in the following areas: care and feeding; nursing the elderly; social security; legacies and bequests; entailed estates, as well as in relation to environmental problems: disastrous global warming and persistent plutonium; reparation for slavery; economic development; and finally population policy. There are of course differences between these examples of intergenerational ethics. For example, as Solum explains in relation to global warming:

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[5] *Pacific Fur Seal Arbitration (United States of America v. Great Britain)*, 1 Moore's International Arbitral Awards (1893) 733.

[6] *Ibid.*, at 811.

[7] *Ibid.*, at 853.

[8] *Ibid.*

[9] See Solum, *supra* note 2. Professor Fitzmaurice will present in this book the views of Professor Solum, who explained intergenerational ethics context in relation to, *inter alia,* environmental law.

> The progress of science has, ironically, created an awareness of risks to future generations that may easily be reduced to calculable probabilities of quantifiable harms. Global warming might be such a case. Assume . . . that consumption of greenhouse gases by current generations poses an unquantifiable risk of global environmental catastrophe for our children's children (where the phrase is taken to mean our descendents who will be alive at the time when we are all dead). What duty do we owe them? How much of our welfare ought to be sacrificed for nonquantifiable chance of an improvement in theirs?[10]

However, according to Solum, unlike global warming, persistent plutonium involves calculable risks and quantifiable consequences.[11] There are many concepts and definitions of intergenerational and generational justice in intergenerational ethics. Solum distinguishes between political and personal morality and analyses the notion of justice. Intergenerational justice is based on the notion of a generation, which, as this author admits, is in popular knowledge 'muddled'.[12] However, out of many possible definitions, Solum distinguishes and analyses three: demographic cohort generations; lineal descent generations; and unborn future generations. It appears that this last notion of a generation is the one which was adopted by Brown Weiss in her theory of intergenerational equity. Solum, however, notes the lack of clarity of this term, which may refer to people who will exist in the future but are as yet unborn; or to those who will not be born during the life of the speaker or possibly the life of any a person who is currently alive. It is not quite clear which type of unborn generations Brown Weiss refers to. It appears, however, that she approaches future generations as one general group whose place in time is not defined:

> In this partnership, no generation knows beforehand when it will be the living generation, how many members it will have, or even how many generations there will ultimately be. If we take the perspective of a generation that is placed somewhere along the spectrum of time but does not know in advance where it will be located, such a generation would want to inherit the Earth in at least as good condition as it has been in for any previous generation and to have as good access to it as previous generations. This requires each generation to pass the planet on in no worse condition than it received it in and to provide equitable access to its resources and benefits. Each generation is thus both a trustee for the planet with obligations to care for it and a beneficiary with rights to use it.[13]

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[10] Solum, *supra* note 2, at 167.

[11] *Ibid.*

[12] *Ibid.*, at 169.

[13] E. Brown Weiss, 'Intergenerational Equity: A Legal Framework for Global Environmental Change', in E. Brown Weiss (ed.), *Environmental Change and International Law: New Challenges and Dimensions* (1992) 385, at 397.

Solum also notes that, since the definition of a generation is ambiguous, the term 'intergenerational' is also quite vague. Intergenerational ethics also involve certain duties directed towards generations. This package of duties between generations was conceptualized by Brown Weiss in a notion of a partnership between generations which translated itself into the form of trust. In intergenerational ethics these duties may involve backward-looking duties, which are contemporaneous (social security – the duty of the younger working generation to finance social benefits for the elderly); and non-contemporaneous (reparations – the duty of a present generation to compensate a deceased former generation for an injury done to it); and forward-looking duties, which are contemporaneous (care and feeding – the duty of parents to care for their children) and non-contemporaneous (persistent plutonium – the obligation of the present generation not to cause pollution that will injure unborn future generations).[14] Inter- and intra-generational morality is frequently referred to as an issue of 'intergenerational justice' or 'intergenerational equity' or, as in case of lawyers or economists (for example Brown Weiss), equity is used as a synonym for justice.[15] Justice can be corrective or distributive.[16] This is no place to discuss all theories concerning distributive justice. The focus of the analysis in this chapter will be on the theory of distributive justice, as embodied by Rawls, and which forms the philosophical background of the Brown Weiss doctrine. Very broadly speaking, his theory is based on a concept of justice as fairness and of sharing the benefits and burdens in society.

Rawls addressed social inequalities in society, the perception of which depends on individual characteristics and place in society, so that they are biased.[17] Rawls aimed at discarding these preconceived biases. What would be a concept of a 'just society' if people were deprived of their class status, political beliefs, health, religion; in other words if they operated from behind the 'veil of ignorance'.[18]

His idea was to divorce decision-makers from the sense of their identity, which would involve them being totally ignorant as to their final position, capabilities, etc., in short they would find themselves in an 'original position'. This would enable them to understand justice and equality in a

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[14] Solum, *supra* note 2, at 173.

[15] *Ibid.*

[16] Solum is of the view that intergenerational justice might involve both corrective and distributive justice. As an example of the first, he returns to the case of a hazardous persistent plutonium power plant, which was erected by one generation. The issue whether the polluting generations owe duties to unborn future generations is a question of corrective justice (the obligation to create a trust fund): Solum, *supra* note 2, at 175.

[17] Rawls, *supra* note 2, at 15–19.

[18] *Ibid.*, at 136–42.

different light from that derived from a formal equality approach.[19] Rawls introduced the so-called 'difference principle' which, broadly speaking, is based on a premise that individuals behind the 'veil of ignorance' would find a fair and equal society if the assignment of benefits would result in just distribution and the eradication of economic inequities, in particular in relation to the least advantaged members of society. The final purpose of equal economic distribution is to make everybody better off.[20]

Rawls' theory was originally applied in the context of a State, relating to individuals in a single society. However, it had been observed that this theory can be also useful in an inter-state application, although not without certain difficulties, as analysed by Drumbl in his excellent essay.[21] Some of these shortcomings are, according to Drumbl, related to the fundamentally procedural nature of the Rawlsian theory. As he explains, environmental justice is concerned with just outcomes, which are based on economic inequality. Therefore, Drumbl suggests that the transformation of the Rawlsian theory onto an international level in environmental matters could be achieved by 'melding Rawlsian approaches to economic justice with environmental regulation' by which 'developing nations may have effected a particularly important paradigm shift in international relations and foreign policy'.[22] The human conduct, as a means of the deliberate amending of inequalities, may be a solution to not entirely relying on the 'luck' of being born in a rich country, as was professed by Barry.[23]

Social justice as an underlying principle of Brown Weiss' theory, however, had an intertemporal dimension, which in fact was also raised by Rawls. In his theory, this element appeared after a person assumed the 'veil of ignorance' (i.e. discarded all prejudices). Not only did Rawls include the time element, but the time element stretched also between the generations. Intergenerational justice, like Brown Weiss' concept, was based on the 'just savings principle', according to which each and every generation has to preserve the heritage of previous generations and put aside a suitable amount of capital. As Drumbl rightly observes, generational justice can be applied to the environment. He writes:

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[19] *Ibid*., at 14–15.

[20] *Ibid*., at 61 and 83.

[21] M. Drumbl, 'Poverty, Wealth, and Obligation in International Environmental Law', 76 *Tulane Law Review* (2002) 843, at 903–905.

[22] *Ibid*., at 902–4. Drumbl in his excellent essay introduces a theory of a social compact in which responsibilities between the 'colonizers of the North' and the 'colonised of the South' are corrected by the North.

[23] Barry II, *supra* note 2, at 129. See also Barry's theory of the 'extreme risk aversion': B. Barry, 'John Rawls and the Search for Stability', 105 *Ethics* (1995/IV) 874, at 882 (hereinafter Barry III).

> If people in the 'original position' did not know what generation they would be born into, then persons would take better care of the environment if there were a risk that they could be born into a generation whose predecessors had desecrated the environment or emptied it of its resources. International environmental lawyers have gone one step further and have applied intergenerational justice as a rationale for global environmental governance. For example, Edith Brown-Weiss writes that intergenerational justice encompasses the duties we owe future generations to maintain a natural environment capable of sustaining life and civilisation at least to the same standard of living enjoyed today.[24]

The just savings principle is relevant to economic development, but it may also be applicable to other areas of relations between generations.[25] As Solum explains, if the state of the environment can be viewed as a capital resource, then intergenerational pollution may be limited by the just savings principle and:

> policy choices about *persistent plutonium* and *global warming* might be constrained by the just savings principle, although the constraint might be fairly loose. Degrading the environments of future generations would be consistent with the just savings principle so long as the total bundle of primary goods passed to future generations was adequate.

The philosophical foundations of the Brown Weiss' theory were also the subject of certain criticism which mainly derived from two sources: the critique of the theory of Rawls itself and her adaptation of his theory to fit intergenerational equity.[26] As was noted above, the problem of intergenerational justice according to Rawls is centred on his theory of original position and the veil of ignorance. According to Rawls, intragenerational and intergenerational justice are based on a contractarian approach (much criticized), which is founded on a presumption that rational people in a hypothetical original position, stripped of their individual preferences and under the veil of ignorance, would agree to the principles of justice.

People in the original position have knowledge only of the conditions of human society, which is by his definition a 'cooperative venture for mutual advantage'.[27]

Rawls's social contract theory is very much limited to the relationship between physically existing people,[28] therefore contacts between people

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[24] Drumbl, *supra* note 22, at 919–20.
[25] Solum, *supra* note 2, at 184.
[26] See the in-depth analysis of these issues by Redgwell, *supra,* note 2, at 100–109.
[27] Rawls II, *supra* note 2, at 4.
[28] *Ibid.*, at 15.

and animals are outside this relationship.[29] The lack of injured parties, i.e. future generations, makes the application of Rawls's theory between generations very problematic.[30] Present people may not want to limit their expenditure and consumption in favour of non-present individuals, as it may not be in their interest.[31]

Motivated assumption is an answer to justice between generations, as in the real world the principles of justice should be capable of being presented as mutually advantageous. Rawls analysed the possibility (and the difficulties) of the extension of certain principles of justice within one generation (intragenerational justice) to justice between generations (intergenerational justice). Intragenerational justice is based, according to Rawls, on two principles: the fundamental principle of justice, granting basic liberties, and the second, which provides for the distribution of social goods. The second principle favours the least advantaged, and thus allows for inequities in a society (the so-called difference principle). This principle was later reformulated by the creation of the so-called 'savings principle' '[s]ocial and economic inequalities are to be arranged so they are . . . to the greatest benefit of the least advantaged, consistent with a just savings principle'.[32] The relationship between the 'difference principle' and the 'savings principle' is not quite clear; however, according to Rawls the savings principle to a certain degree constraints the difference principle.[33]

Rawls explained that the difference principle is inapplicable to different generations over time. Therefore, in order to modify this principle, he places behind the veil of ignorance the members of past, present and future generations. Without the device of the veil of ignorance, past generations would not approve of ameliorating the fate of future generations, as they would not benefit from any savings made in the present.[34] However, if past generations are placed behind the veil of ignorance, they do not know to what generation they belong.

However, according to Dierksmeier this solution does not necessarily lead to an expected result. He argues:

> As long as the deliberating individuals know themselves to be contemporaries – which is imperative for them to deal effectively with every other aspect of their political lives – another problem remains. Pondering that, whatever their historic starting position, future . . . generations cannot negatively affect them,

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29 *Ibid.*, at 261.
30 See comments on this in Barry I, *supra* note 2, at 190–91.
31 Dierksmeier, *supra* note 2, at 74.
32 Rawls I, *supra* note 2, at 257.
33 *Ibid.*, at 257.
34 *Ibid.*

> they could come to the conclusion to not save at all, and so maximise their interest.[35]

In order to overcome this hurdle, there were certain ideas based on the principle of 'endlessly overlapping generations to each and every future generation so that the abstract interests of future generations would be cared for by ever-concrete interest of the contiguous generations'.[36]

Rawls put forward several theories which were aimed at overcoming the exclusively generational aspect of intergenerational justice, such as 'the caring parents approach', treating decision-makers as 'heads of families', having an emotional interest in 'immediate descendants'.[37] However, this approach was abandoned in favour of his initial idea of the original position in which all generations were represented.[38] Rawls' later writings adjust intergenerational theory to his views expressed in *Political Liberalism* and elaborated in *Justice as Fairness: A Restatement.*[39] The question of savings, according to Rawls, as elaborated in 2001, 'must be dealt with by constraints that hold between citizens as contemporaries' and that 'the correct principle, then, is one of the members of any generation (and so all generations) would adopt as the principle they would want preceding generations to have followed'.[40] However, this rule does not convince all scholars who argue that:

> . . . any one rational maximiser would willingly impose upon himself restrictions that *de facto* make it impossible that he pursue his self-interest most efficiently? The savings of former days are his, no matter how he will decide regarding the interests of posterity. So, why reduce his welfare without a payback arrangement? Only actors already morally motivated will agree to such a limitation of their consumer wants.[41]

The critical analysis of Rawls' theory by Dierksmeier leads to the conclusion that 'any good theory of intergenerational equity cannot exclusively be explained by rational choice theory and sheer human self-interest. In contrast, a moral-based explanation is essential to justify generational

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35 Dierksmeier, *supra* note 2, at 75.
36 *Ibid.*
37 Rawls I, *supra* note 2, at 256.
38 *Ibid.*
39 J. Rawls, *Political Liberalism* (1993) (hereinafter Rawls IV); J. Rawls, *Justice as Fairness: A Restatement* (2001) (hereinafter Rawls V).
40 Rawls V, *supra* note 39, at 160.
41 Dierksmeier, *supra* note 2, citing B. Dauenhauer, 'Response to Rawls' in R. Cohen et al. (eds), *Ricoeur as Another: The Ethics of Subjectivity* (2002) 203, at 208.

justice'.[42] In order to overcome the difficulties of the concept of intergenerational justice, Brian Barry limits his theory by excluding past generations.[43] He based intergenerational justice on the premise of 'fundamental equality of human beings' which applies to contemporaries and intergenerational justice.[44] Barry also explained that only two of his four fundamental principles of justice apply in the context of intergenerational justice: the principle of responsibility and of 'vital interests'.[45] Barry addressed the question of renewable resources from the intergenerational perspective and came up with the idea in relation to renewable resources that later generations should not be left worse off in terms of productive capacity than 'they would have been without the depletion'.[46] Barry took into consideration growing costs which have to be borne by future generations in order to extract natural resources which were depleted by previous generations. These costs result in the need to establish to what extent non-renewable natural resources may be depleted by present generations without breaching the requirements of intergenerational justice. Present generations should limit their depleting of natural non-renewable resources in order not to worsen the opportunities available to future generations.

The application of the responsibility principle in particular Barry's idea of egalitarism, was critically analysed by Beckerman. Beckerman argues that Barry's concept of egalitarism:

> would go so far as to say that it would be 'unjust' to take something away from any group in any society, however well off, in order to improve the welfare of some other contemporary group, however badly off. To adopt such a position would mean opposing any egalitarian policy involving a redistribution from

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[42] J.C. Tremmel, 'Introduction', in J.C. Tremmel (ed.), *Handbook of Intergenerational Justice* (2006) 1, at 10, *supra* note 2.

[43] B. Barry, 'Sustainability and Intergenerational Justice', in A. Dobson (ed.), *Fairness and Futurity: Essays on Environmental Sustainability and Social Justice* (1999) 93, at 107. He writes as follows:

> '. . . it must be conceded that the expression "intergenerational justice" is potentially misleading . . . It is simply a sort of shorthand for "justice between the present generation and future generations". Because of time's arrow, we cannot do anything to make people in the past better off that they actually were, so it is absurd to say that our relation to them could be either just or unjust.'

However, Barry's theory of justice is broader from Humean's perspective by rejecting his 'rough equality of power', as such an approach would exclude, for example, unjust treaties.

[44] *Ibid*., at 96.

[45] *Ibid*., at 98.

[46] B. Barry, 'The Ethics of Resource Depletion', in B. Barry (ed.), *Democracy, Power and Justice* (1989) 511, at 519.

> richer to poorer. But it may sometimes be just to make some group in society worse off against their will in the interests of helping people who are worse off, why would it always be unjust to follow policies that *might* conceivably make future generations worse off even if it is in order to avoid imposing certain burden on some of the people today?[47]

Scholars who in principle support the generational justice approach to environmental law admit, however, as is seen from the above discussion, that it is not without certain theoretical difficulties, as was explored by Edward Page in relation to climate change.[48] One such difficulty is of course the aforementioned problem of reciprocity (contractarian approach). Page observes that:

> if reciprocity determines the scope of justice, as writers such as Rawls and Gauthier believe, there seems to be no room for future persons having claims to resources from their ancestors – they get what they inherit, and should count themselves lucky to get it![49]

The inherent problems with the justice approach to generations is that it requires, according to the same author, its revision as regards both sceptics and enthusiasts.[50]

The most fundamental question regarding intergenerational justice is the issue of the rights of future generations, their very existence and their scope. First, the most fundamental issue is what are the rights which future generations may enjoy: moral rights or written rights? It appears that there is no unambiguous answer to this question. The majority appears to adhere to the view that they are moral, not written, rights. However this issue becomes more complicated in the case of the rights of future generations enshrined in many constitutions, i.e. are they still moral rights, or legal rights or perhaps both moral rights and legal rights? Tremmel is of the view that in democratic States most legal norms are also moral norms.[51] Further, if we accept that future generations have rights, a new question

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47 Beckerman/Pasek, *supra* note 2, at 43 (emphasis added).

48 E.P. Page, *Climate Change, Justice and Future Generations* (2006).

49 *Ibid.*, at 105.

50 'A small, but significant, measure of intergenerational equity is a direct challenge to sceptical views that downgrade the ethical status of future persons because they are viewed as being unable to reciprocate ongoing attempts to mitigate global climate change. But it also suggests that the current focus of enthusiasts on subject-centred principles of justice should be widened to make space for other, less fashionable, principles, such as fair reciprocity': *ibid.,* at 129.

51 See in depth J.C. Tremmel, 'Establishing Intergenerational Justice in National Constitutions', in Tremmel (ed.), *supra* note 2, at 187, 187–212.

arises: what is the definition of these rights and obligations and who decides on definition?[52]

Beckerman and Pasek are one of the fiercest critics of the theory of rights of future (unborn) generations. They are against the symmetrical concept of rights and obligations, and is of the view that obligations do not always create rights, whilst rights always create obligations. In many of Beckerman's publications, he expressed the strong view that future generations cannot have rights. However, we should accord them 'moral standing' and take account of their interests:

> Thus, we have moral obligations to take account of the interests of future generations in our policies, including those policies that affect the environment . . . [t]he rights if future generations cannot be protected within the framework of any theory of international justice.[53]

His negation of the rights approach to future generations is based on semantics, as his general argument that future generations cannot have anything, including rights, follows from the meaning of the present tense of the verb 'to have'. He emphasized many times in his writings that 'unborn people simply cannot have anything. They cannot have two legs or long hair or a taste for Mozart.'[54] Tremmel did not agree with his argument and, although he conceded that Beckerman's argument was correct, it was nevertheless of minor importance and its purpose was to replace the present tense with the future tense ('future generations will have rights').[55] Beckerman argues that if future generations cannot have rights, they equally cannot have 'interests', 'needs', 'wishes', etc. He states:

> If we want to favour the term 'interests' over 'rights', we must find other arguments. The hint to using the future tense instead of present tense in wording of constitutional amendments is just a minor aspect. It is more important which nouns, verbs or adjectives are chosen. Beckerman claims that his argument denounces the term 'rights of future generations' . . . , but he is incorrect.[56]

Beckerman and Pasek are strong believers in ameliorating the position of future generations by leaving them a decent society and a greater respect for human rights, instead of according to them rights which they cannot have.[57]

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52 *Ibid.,* at 201–203.
53 Beckerman/Pasek, *supra* note 2, at 124.
54 Beckerman, *supra* note 2, at 55.
55 Tremmel, *supra* note 52, at 200.
56 *Ibid.*
57 Beckerman/Pasek, *supra* note 2, at 43.

Similar doubts were expressed by Page, i.e. whether generations as a whole should possess rights, in contrast to a future cultural group or nation. Such an idea appears to be too abstract as a ground of a theory of intergenerational justice, as well as due to the fact that people 'do not generally act as if their generation, assuming they agree on what this might be, possess any independent value'.[58]

Yet another, fundamental, question is the issue touched upon by some scholars who accord rights to future generations, but not unreservedly. For example, some scholars adhere to the theory of 'weaker' obligations towards future generations than those towards the present generation because the claims of future generations are conditional and depend on the existence of future generations to make the claim, in contrast to present generations, which have actual claims, which are not conditional.[59]

Further, the non-identity argument has to be taken into account as very pertinent in relation to intergenerational justice, the character of which is far from clear in ethics and has been the subject of many philosophical writings (in-depth analysis of this issue is not within the remit of this chapter).[60]

In broad brushstrokes, justice or rights cannot be attributed to future generations because our acts, actions and policies, although remote, are indispensable to their coming into existence. Such an approach excludes the complaints of future individuals (or perhaps groups) relating to past injustice as, without them, they would never have been born. This is a philosophical puzzle – certain actions will result in harm for future generations; however, without these actions future generations will not come into existence.[61] In relation to climate change, this problem can be formulated as follows:

> For, if it is nonsensical to compensate present person for ancient wrongs committed to their ancestors, it is likewise nonsensical to insist that countries that contributed to vast majority of greenhouse emissions prior to 1990, have more

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[58] Page, *supra* note 48, at 156. This author sees the value of her theory in its application to cultural groups rather than generations: '[t]he idea is that appeals to holistic rights avoid problems of non-identity because the conditions of group existence are more fixed than those of their individual members: they typically endure for a much longer time-span, for example, and their formation does not depend upon the coming together of a particular sperm and egg'.

[59] D. Callahan, 'What Obligations Do We Have to Future Generations?', in E. Partridge (ed.), *Responsibilities to Future Generations: Environmental Ethics* (1981) at 82.

[60] See D. Parfit, *Reasons and Persons* (1984); see also T. Scanlon, 'Contractualism and Utilitarianism', in A. Sen and B. Williams (eds), *Utilitarianism and Beyond* (1982) 103, at 103–28; T. Scanlon, *What We Owe to Each Other* (1981); W. Kymlicka, *Liberalism, Community and Culture* (1989).

[61] Page, *supra* note 48, at 132, i.e. Chapter 6 'The Non-Identity Problem'.

> than a modest harm-based duty to pay for the costly measures needed to reduce emissions. This is because the greenhouse emissions that contributed to the climate problem originated in acts and policies that also modified the size and composition of subsequent generations of all countries. If we find this implausible, it is worth asking whether a world without carbon industries would have supported a rise in world population from 2.5 billion in 1950 to over 6.4 billion people in 2005.[62]

There are a number of unresolved issues concerning the problem of non-identity, in relation both to the individual and to the group-centred approach.[63]

III. THE THEORY OF INTERGENERATIONAL EQUITY: INTRODUCTORY ISSUES

Professor Brown Weiss, in order to overcome the unresolved problems of the rights of future generations and intergenerational justice, introduced several new elements to philosophical theories of intergenerational justice, such as the theory of trust and the partnership (past, present and future) between generations, and linked these together in the theory of intergenerational equity. The Earth resources are in a trust, and they are passed to us by our ancestors and passed by us to our descendants in order to maintain sustainability. Her theory is based on the premises of human beings as a part of a natural system, also linked to other human beings, members of one generation, as well as engaged with different generations of the human species, using the common patrimony of earth. All generations are equal in their use of our planet, and the partnership between generations is a corollary to equality. Each and every generation must safeguard a healthy environment for other generations. The partnership of generations is not based on full knowledge, of e.g., how many members the future generation will have; what will the members of future generations be like, etc. Future generations are obliged to compensate for the

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62 *Ibid.*, at 137.

63 Page argues that the group-centred approach could provide only a partial solution to the non-identity problem. He says as follows:

> 'Suppose that a course of action that we think will harm a certain future group's interests would be also a necessary condition of that group coming into existence in first place. In such cases, the approach seems open to a new group-centred puzzle which we might call the *extended non-identity problem*.'

Page, *supra* note 48, at 157.

damage done and not remedied by a previous generation. However they can distribute the costs of doing so across several generations by way of various financial means. Brown Weiss found the roots of this concept in general international law (such as the United Nations Charter and the Preamble to the Universal Declarations of Human Rights) and various religious, cultural and legal traditions. Intergenerational equity is based on three principles: conservation of options (future generations should be entitled to diversity comparable to that enjoyed by previous generations); conservation of quality (each generation should be obliged to maintain the minimum quality of the planet, so as to pass it on in no worse condition to future generations); and the conservation of access (each generation should secure to its members equitable rights of access to the legacy of past generations and should secure this access for future generations). The use of the resources of our planet is restricted by the rights of future generations. These principles, according to the theory of Professor Brown Weiss, form the nexus of intergenerational obligations and rights or, in other words, planetary obligations and rights which are held by each and every generation. These rights are integrally linked and the rights are always linked with obligations. They originate as moral obligations, which must transform into legal rights and obligations. These rights and obligations are present in each generation and linked between generations. They also exist between the members of the present generation. As a category of human rights these are group rights, different from individual rights, as generations hold these rights as groups in relation to other generations. Brown Weiss lists certain categories of activities which can be earmarked as adversely impacting upon intergenerational rights.[64] She also deals with the enforcement of such interplanetary rights, possibly by a guardian or a representative of future generations as a group, and proposes the establishment of a special office which would undertake the responsibility to guard the interests of future generations, such as ensuring that the laws impacting on the environment and natural resources are implemented and investigating complaints. She also endorses the alternative idea of the appointment of the planetary ombudsman or commissioners for future generations as well as the creation of planetary users' fees and funds for future generations and scientific research programmes to analyse and reduce long-term environmental dangers.

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[64] Such as waste the impact of which cannot be restricted either spatially or over time; damage to soil such that it is incapable of supporting fauna and flora; destruction of tropical forests, and resulting restriction of biodiversity, destruction of national monuments constituting a part of the national heritage of mankind; certain nuclear activities; destruction of libraries or gene banks: E. Brown Weiss, *supra* note 13, at 408.

The theory of intergenerational equity was subject to a certain degree of criticism. One of the authors argued that if we intervene to conserve the environment for future generations, we are doomed to disaster. Professor D'Amato's main criticism was based on the so-called 'Parfit's paradox', which originated in combination with the theory of chaos. He presented a dual argument: first, future generations cannot have any rights because they will consist of individuals who at the moment do not exist; and, secondly, there cannot be a rationale behind actions and interference by us at the present time if the effect they will have is on future generations, as we do not know what will be the requirements or physical or psychological make-up of these generations to come as a result of our interference. The same author further assesses the whole concept as anthropocentric, thus not taking into sufficient account the rights of animals.[65] The place of non-humans within environmental discourse had been analysed for many years within the context of moral dilemmas which included not only humans but also issues between humans and non-humans, humans and natural resources, in general environmental ethics.[66] Professor Lowe pointed out the fundamental flaws of this doctrine. His arguments are as follows: the principle of trusteeship of the earth and natural resources is not a norm so much as trusteeship in English law, but is composed of a cluster of rights and duties (which would be norms and 'therefore two removes from the concept of sustainable development'[67]); further, 'who are the beneficiaries? What is their right of action? What are the duties of the trustees?'[68] He terms intergenerational equity as a 'chimera' in a normative sense, since:

> it is hard to see what legal content inter-generational equity could have, as equity is by definition a technique for ameliorating in the name of justice the impact of legal rules upon the existing legal rights and duties of legal persons. By definition, most 'other' generations could not appear to secure the enforcement of their own rights, even if 'generations' had *locus standi* in international law. There may, therefore, strictly be no rights to which equity can be applied.[69]

Brown Weiss defends her approach by observing that intergenerational equity is a group right; thus the position of an individual is not important

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[65] A. D'Amato, 'Do We Owe a Duty to Future Generations to Preserve the Global Environment', 84 *AJIL* (1990) 92, at 92–194.

[66] See, e.g., A. De-Shalt, 'Environmental Policies and Justice between Generations', 21 *European Journal of Political Research* (1992/III) 307, at 312.

[67] V. Lowe, 'Sustainable Development and Unsustainable Arguments', in A. Boyle and D. Freestone, *International Law and Sustainable Development: Past Achievements and Future Challenges* (1997), 19, at 27.

[68] *Ibid.*

[69] *Ibid.*

in the shaping of the rights of future generations. In her defence to other critical remarks (the excessive anthropological approach), she argues that the concept places human beings and other living creatures together, thus not isolating them or diminishing the importance of non-human creations.[70] It should, however, be considered that the anthropocentric aspect of this theory originated in Rawlsian philosophy in which he argued that only humans have the capacity for justice, and therefore any moral duties were restricted to humans.[71]

Other critics argue that Brown Weiss wrongly conceptualized human rights in relation to intergenerational equity. She extends the concept of human rights across the time 'while at the same time embracing a generic human right to a decent environment'.[72] Therefore doubts were expressed whether the human rights context is a proper forum in which to discuss intergenerational equity, since it is not quite clear whether the environmental human right exists at all. He argues for the possibility of the existence of such rights since they operate 'across space and time of behalf of broadly defined social and economic goods',[73] but sees as a valid point of criticism the problem relating to the needs of future generations (as we do not know what they would be like), even less so what would be the condition of our planet in a distant future.[74]

Fundamental critical comments are also expressed which put in doubt the legal content of this principle, due to its inherent vagueness, as well as to the indeterminate character of the underlying principles.[75] As Warren argues:

> The difficulty with elevating the concept to the status of a principle is that it is so vague; how do we measure fairness, how do we know what future generations will want or need, how far into the future should we look?[76]

The theory of intergenerational equity was also challenged on an ethical basis, such as the element of inherent selfishness characterizing human

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[70] E. Brown Weiss, 'Our Rights and Obligations to Future Generations for the Environment', 84 *AJIL* (1990) 198, at 204; see also E. Brown Weiss, *supra* note 13; A. Gillespie, *International Environmental Law, Policy and Ethics* (1997), at 124–46; L. Warren, 'Intergenerational Equity', available online at: http://www.corwm.org.uk/Pages/Plenary%20Meetings%20Past/Pre%20November%202007/2006/11-12%20April%202006/673%20-%20Intergenerational%20Equity.doc (last visited on 5 December 2007).

[71] Rawls I, *supra* note 2, at 164, 177–8.

[72] G.P. Supanich, 'The Legal Basis of Intergenerational Responsibility: An Alternative View–The Sense of Intergenerational Identity', 3 *YBIEL* (1992) 94, at 96–9.

[73] *Ibid.*, at 97.

[74] *Ibid.,* at 98.

[75] Warren, *supra* note 70.

[76] *Ibid.*, at 1.

nature, which is often reflected in our indifference to the fate of distant human beings such as future generations.[77] Therefore, certain authors attempt to find a different ethical basis for this theory, for instance that our gratitude towards past generations should be reflected in paternalistic responsibility for future generations.[78]

The main feature of the criticism expressed in relation to this theory is the attempted regulation of the generations who are not identified. This is also a problem which arises in relation to economic issues such as the apportionment of benefits and costs. Other concerns were put forward in relation to sustainable development. According to Alder and Wilkinson, strong sustainable development requires each generation to pass what are in essence the same environmental goods to the future generations.

It may be said that the theory of intergenerational justice did not overcome serious theoretical issues of the application of generational justice between generations. First, the most fundamental question remains unresolved: do future generations have rights? Are these rights moral or written? As was observed above, serious arguments to the contrary were presented by a number of philosophers, such as Beckerman, who consistently in all his publications denied the existence of such rights. Brown Weiss accepts as a given that future generations have rights; therefore, no arguments were submitted refuting Beckerman's assertions (or, for that matter, arguments supporting her theory, predicated upon the existence of such rights).

Even if we accept that future generations have rights, a number of issues remain unresolved, such as the question of the purely contractarian character of generational equity and the problem of non-identity. The introduction of the concept of trust and, flowing from this, partnership between generations, in the view of the present author, did not remedy the conceptual difficulties of intergenerational justice, neither did the introduction of planetary rights enjoyed by all generations which, according to Brown Weiss, are group rights. The character of group rights, as such, is not without its problems and the applicability of these rights to the whole generation is doubtful. Even if we assume that such group rights can be applied to cultural groups, this still does not solve the problem of planetary rights accorded to whole generations.

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[77] Gillespie, *supra* note 70, at 117.
[78] J. Alder and D. Wilkinson, *Environmental Law and Ethics* (1999).

IV. CERTAIN NECESSARY CLARIFICATIONS IN THE UNDERSTANDING OF THE CONCEPT

It may also be observed that there is a certain general lack of consistency in nomenclature and that that different meanings of the concept of intergenerational equity are used interchangeably and are often incorrectly assimilated. The present author identified at least three ways which describe intergenerational equity in various publications, all of them under the same *chapeau* of the theory (concept) of intergenerational equity:

(i) simple invocation of future generations in Conventions (such as the 1946 Whaling Convention) and Constitutions;
(ii) intergenerational equity as the concept of trust (drawing from the concept of trust in English and American laws);
(iii) intergenerational equity as a philosophical concept of intergenerational justice (see e.g. Rawls)

There is a subgroup:

> ii and iii (a) intergenerational equity which both draws from and modifies the concept of trust and the philosophical concept of intergenerational of justice. This is represented by Brown Weiss.

These different approaches are constantly confused and frequently treated as the one theory. For example, Judge Weeramantry in his opinions gives numerous examples of the treaties which contain the 'generational' aspect, which he assimilates with the theory of trust (the International Court of Justice as a trustee for future generations).

In various international environmental conventions, such as the 1946 Whaling Convention, the future generations are usually mentioned in the Preamble: '[r]ecognising the interest of the nations of the world in safeguarding for future generations the great natural resources represented by the whale stocks'. A similar example is contained in the 1979 Convention on the Conservation of Migratory Species of Wild Animals (the 'Bonn Convention'): '[a]ware 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 utilised, is used wisely'. Such statements do not amount to the concept or the theory of intergenerational justice, equity or the establishment of a trust between the generations. Their character is very hortatory, which in fact does not aspire to impose any binding legal obligations. Such statements do not even have the legal character of 'principles' as opposed to 'rules'. Such a distinction was introduced by

Professor Boyle, who explained that certain environmental treaties may generate principles, but not rules.[79] He identified intergenerational equity with such principles:

> Sustainable development, intergenerational equity, or the precautionary principle, are all the more convincing seen in this sense: not as binding obligations which must be complied with, but as principles, considerations or objectives to be taken into account of, may be soft, but they are still law.[80]

The aspirational character of such statements precludes the equation of the simple invocation of future generations in the Preambles to several conventions with the concept of trust. However, as stated above, there is a methodological confusion and a lack of structured approach to this issue.[81]

V. INTERGENERATIONAL EQUITY AS A TRUST

Although it is an accepted view that the theory of Brown Weiss is based on Rawlsian distributive justice, it may also be said that the concept of trust, which plays a pivotal role, may be viewed as an element of corrective justice in her theory. As stated above, Solum, for example, suggested that as a reflection of corrective justice the polluting generations might be obliged to create a trust to compensate unborn future generations for injuries they would incur. She draws equally from the concepts of trust in domestic and international laws.

It may be said that, historically, the concept of intergenerational equity as a trust originated in the *Bering Fur Seal* arbitration and, at the same time, it was the most progressive and innovative approach. This approach was based on a concept of natural resources (in this case seals) put in a trust for the whole of humankind, thus dissociating them from the sovereignty or jurisdiction of States. For the same reason, it also provided for the imposition of certain regulatory measures outside the States' jurisdiction in the areas traditionally open to all States granting them almost unrestricted access for the utilization of natural resources. This innovative use of a trust has 'an increasingly important role to play in environmental protection' as:

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[79] A. Boyle, 'Some Reflections on Relationship of Treaties and Soft Law', in V. Gowlland-Debbas (ed.), *Multilateral Treaty-Making: The Current Status of Challenges to and Reforms Needed in the International Legislative Process* (2000) 25, at 32.

[80] *Ibid.*, at 33.

[81] See also Redgwell, *supra* note 2, at 180.

> the essence of trust concept is in the separation of legal and beneficial ownership of property. As a legal owner of the trust property, the trustee has the management powers over the trust property, but subject to the duty, enforceable under the equitable jurisdiction of the courts, to exercise those powers for the exclusive benefit of the beneficiary who is the beneficial or equitable owner of the trust property.[82]

Trust are established on the basis of 'three certainties': the certainty of words; the certainty of subject; and the certainty of object (the requirement which is more relaxed in relation to charitable trusts). However, as Redgwell observes, private trusts in general are largely anthropocentric and their usefulness for the protection of the environment is limited for at least three reasons:

(i) the rule against perpetuities prohibits the private trust device from being used for the intergenerational protection of environmental assets;
(ii) only property owned by the settlor may be subject of a private trust; and
(iii) private trust may be established only for the benefit of a specific named beneficiary or a specific class of beneficiaries.

All these restrictions lead this author to the conclusion that a private trust over public lands for the benefit of unmade future generations would not be legally possible. Redgwell further investigates charitable trusts and the public trust doctrine as to their possible uses for the benefit of future generations. Charitable trusts appear to be more suitable for the purpose of the protection of the environmental rights of future generations. They are characterized by certain features which make them a more effective tool than private trusts from the intergenerational interests' point of view. First, charitable trusts may be gifted in perpetuity and they are established for a purpose, not in the name of a specific beneficiary, and their purpose must be:

> the benefit of the community or an appreciably important section of the community and not for the benefit of particular private individual nor for a class of private individuals, such as the employees of a particular employer.[83]

The suitability of charitable trusts for the protection environmental intergenerational rights is enhanced by the operation of the *cy-près* doctrine, which allows charitable trusts to survive if the trust fails and allows

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[82] Redgwell, *supra* note 2, at 7.
[83] *Ibid.*, at 13–14.

the transfer of trust property to other charitable purposes as close to the original purpose as possible. Charitable trusts have many other distinguishing features which are different from those of private trusts: they enjoy several exemptions from:

(i) the 'certainty of objects' (in relation to specific beneficiaries);
(ii) the rule against perpetuities; and
(iii) to a large degree the doctrine of lapse.

Charitable trusts also attract taxation benefits.[84]

There is a problem of fitting the protection of the environment into the definition of the charitable fund.[85] There is a difference between the positions of nature and animals in relation to the protection available under charitable funds. Parks of outstanding natural beauty may be included; however, the protection of such trusts extends to animals only if they are useful to humankind. Such a condition emphasizes the anthropocentric character of charitable funds in so far as they relate to animals. At present the wildlife in the United Kingdom, which is included in charitable funds, is registered under the heading of 'education'.[86] Charitable trusts are limited to operations which do not have a political purpose as their direct aim. They frequently establish an institutional body to maintain and operate the trust (such as the National Trust). Trusts also have financial means in so-called 'trust funds', which are distinct investment accounts which, as Redgwell observes, may be used for the protection of the environment, and they may even be established to compensate future generations for the loss of natural resources. The portion of revenues paid for the exploitation

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[84] *Ibid.*, at 14.

[85] As Redgwell explains, charitable trusts must be established as a matter of public interest and the charitable trust has to be (or exist) for a charitable purpose (these include the advancement of education; the relief of poverty; and other purposes beneficial for the community). The main categories of contemporary charitable trusts include: social welfare; cultural purposes; conservation of the environment; religious cultural teachings of immigrant communities; and the promotion of racial harmony: Redgwell, *supra* note 2, at 16–17.

[86] *Ibid.*, at 19. The same author also analyses the law relating to charity which is conduced abroad: Redgwell, *supra* note 2, at 19–20. It must be mentioned that at present there is a new Charities Bill pending before the Houses of Parliament, which extends the charitable purpose: the prevention of poverty; the advancement of education; the advancement of religion; the advancement of health and or the saving of lives; the advancement of citizenship or community development; the advancement of arts, culture, heritage and science; the advancement of amateur sport; the advancement of human rights, conflict resolution or reconciliation or the promotion of religious or racial harmony or equality and diversity; the advancement of environmental protection or improvement; the relief of those in need by reason of youth, age, ill-health, disability, financial hardship or other disadvantage; the advancement of animal welfare; the promotion of the efficiency of the armed forces of the Crown; any other purposes within subsection (4): Clause 2 of the Draft (Meaning of 'charitable purpose').

of natural resources may be deposited by the Government in trust funds to indemnify those generations for losses in natural resources. In such a scheme, the principal is held for beneficiaries, with the State fulfilling the role of a trustee. Further, Redgwell analyses the doctrine of public trust from the point of view of its utility for the protection of the environment for future generations. This doctrine is known to the US law and is derived from the Roman law concept of *res publica.* Sand is also of the view that the public trust doctrine is well established in US environmental law, however contested, partly due to its reliance on property concepts.[87] He is convinced that this doctrine may play a very useful role in the protection of the environment, and to a certain extent in the protection of the rights of future generations. The same author is also of the view that, although a number of US state constitutions contain environmental provisions, 'the interests of future generations – intergenerational equity – remain largely ignored'.[88] However, there are certain constitutions, such as those of Pennsylvania and Florida, which incorporate the theory of intergenerational equity, which is linked to the concept of public trust.[89] According to Christie, the

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[87] On the basis of the relevant case law, the following five-point compatibility with the public trust obligation which have been used by courts: 1. Public bodies will control the area; 2. The area will be devoted to public purposes and open to the public; 3. The diminution of the area of original use will be small when compared with the entire area; 4. None of the public uses of the original area will be destroyed or greatly impaired; 5. The disappointment of those members of the public who wish to use the area of the new use for former purposes is negligible when compared with the greater convenience to be afforded those members of the public using the new facility. Redgwell analyses the complex legal character of this doctrine, whether it is a property concept or one of the public (administrative) law: Redgwell, *supra* note 2, at 44 and 63–8 and P. Sand, 'Sovereignty Bounded: Public Trusteeship for Common Pool Resources?', 4 *Global Environmental Politics* (2004/1) 47. Sand defines the meaning of environmental trusteeship in the following terms:

> '[I]t means that certain natural resources – e.g., watercourses, wildlife, or wilderness areas – regardless of their allocation to public or private users are defined as part of an 'inalienable public trust'; certain authorities – e.g., federal agencies, state governments, or indigenous tribal institutions – are designated as 'public trustees' for protection of those resources; every citizen, as 'beneficiary' of the trust, may invoke its terms to hold the trustees accountable and to obtain judicial protection against encroachment or deterioration.'

He also gives ample examples of other States, such as the Philippines, Eritrea; South Africa and India, which adopted a similar idea of environmental trusteeship: P. Sand, 'Sovereignty Bounded: Public Trusteeship for Common Pool Resources?', 4 *Global Environmental Politics* (2004/1) 47, at 49.

[88] Redgwell, *supra* note 2, at 69.

[89] The Constitution of Pennsylvania provides as follows:

> 'Pennsylvania's natural resources are the common property of all people, including generations yet to come. As a trustee of these resources, the Commonwealth shall conserve and maintain for the benefit of the people.'

inclusion of 'the concept of intergenerational equity in relation to marine living resources adds an intertemporal aspect to Florida's public trust doctrine'.[90]

However, there are some problems with the application of the doctrine of public trust, such as in relation to marine reserves. The use of marine reserves is criticized in that they violate the public trust doctrine. The States hold (their own) lands below navigable waters in trust for the public. The classical public uses protected by the doctrine of public trust were navigation, fishing and commerce. However, some of the States also include recreational use as a part of public trust. Courts have extended trust protection to environmental and ecological protection and the preservation of scenic beauty and of those lands in their natural state, so they may be used as the areas for scientific study, as open space and as environment, which serves as a habitat and as a source of food for birds and marine life.

However, the greatest drawback of this doctrine is that many protected uses can conflict with each other, and the doctrine does not establish a specific hierarchy among them. Therefore agencies and legislatures must balance competing interests based on the appropriateness of the use in relation to a particular area of the ocean.[91] Christie, however, is of the view that, although the State's public trust doctrine does not establish any priorities among conflicting pubis trust users:

> the additional constitutional requirement to preserve the rights of future generations to marine living resources, however, creates an overarching limitation on the exercise of public trust uses. The inherent uncertainty in science and variability in ecosystems necessitates measures to insure the intergenerational rights in

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Cited in and commented on by P. Sand, *supra* note 87, at 49; the Constitution of Florida provides as follows: Article X. Section 16. Limiting Marine Net Fishing,

> '(a) The marine living resources of the State of Florida belong to all of people of the state and should be conserved and managed for the benefit of the state, its people, and future generations . . .'

Cited in D. Christie, 'Marine Reserves, the Public Trust Doctrine and Intergenerational Equity', 19 *Journal of Land Use* (2004) 427, at 433; the same author provides, on the same page, yet another example of the statutory incorporation of this doctrine. The legislation creating Biscayne National Park states:

> In order to preserve and to protect for the education, inspiration, recreation, and enjoyment of present and future generations a rare combination of terrestrial, marine, and amphibious life in tropical setting of great beauty, there is hereby established the Biscayne National Park . . .'

[90] Christie, *supra* note 89, at 434.
[91] *Ibid.*, at 432–3.

> regard to diversity and quality of, and access to, marine living resources. Marine resources can provide that 'insurance policy' for future generations.[92]

Finally, there is the question of international trusts as embodied in the United Nations Trusteeship system. The issue of classical trusteeship is of only historical importance at present, since in 1994 the last territory remaining under the Trusteeship System, the Republic of Palau, became independent.[93] Redgwell analyses such an option. It must be said, however, that the reforming of the Trusteeship Council as a body with functions relating to the environment, as guardian of the interests of future generations, as well as holder in trust for humanity of its common heritage has not gained much support over the years. There are several problems with such as solution such as amendment to the United Nations, and as Redgwell observes:

> a constellation of issues needs to be considered in redesigning the Trusteeship Council. These include: the intended life-span of a revamp Council; the extent of the Charter amendments proposed; the legal relationship between the Charter, as amended, and existing (and future) international environmental agreements; membership of the Council; and finally its functions.[94]

In so far as this system is concerned, the *Case Concerning Certain Phosphate Lands in Nauru*[95] will be discussed, as it was an example of the practical application of the concepts of international trust with the conjunction of intergenerational equity before the International Court of Justice.

The doctrine of international custodianship or stewardship over shared and exhaustible natural resources may be treated as a principle analogous to trusteeship, which supports the theory of intergenerational equity.[96] Some authors approach stewardship as a form of trusteeship (also as 'guardianship' or 'custodianship').[97] A certain form of stewardship over natural resources was proposed as early as in the *Bering Sea Fur Seal Arbitration*.

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92 *Ibid*., at 434.

93 See in depth on this system: Redgwell, *supra* note 2, at 144–74. In 1994 the Trusteeship System suspended operations. See also C. Redgwell. 'Reforming the United Nations Trusteeship System', in W.B. Chambers and J.F. Green (eds), *Reforming International Environmental Governance: from Institutional Limits to Innovative Reforms* (2005) 178, at 178–204.

94 Redgwell, *supra* note 93, at 190.

95 *Case Concerning Certain Phosphate Lands in Nauru (Nauru v. Australia)*. This case was discontinued by Order of the Court of 13 September 1993; *Case Concerning Certain Phosphate Lands in Nauru (Nauru v. Australia)*, Order of 13 September 1993 [1993] ICJ Rep. 322, at 322–3.

96 Redgwell, *supra* note 2, at 32.

97 Sand, *supra* note 87, at 52.

As Sand reminds us, such concepts were suggested e.g., for the protection of living resources both globally and in certain marine areas; global atmosphere, and all global commons, etc.[98] According to the same author, the fundamental political dimension of a trusteeship in which people are only guardians and users of the Earth and its recourses, not the owners, and that States (governments) only manage common natural resources is 'often neglected in purely juridical comparisons between Anglo-American trust law and other legal systems'. He notes another misguided perception of the use of the term 'trusteeship'. This term is frequently used as 'a metaphor' without any juridical content. He also challenges the widely assumed bilateral structure of the relationship between generations of such a trusteeship; present generations of humankind as a trustee and future generations (or 'future humanity') as the beneficiaries. According to Sand, such a structure is typically trilateral, i.e. it contains community (as trustee/ settlor); states (as trustees) and people (as beneficiaries). Sand himself is mindful of a number of problems which are still open for discussion, such as what is the community (global or concerning special international regimes); who are the trustees (states only and /or intergovernmental institutions acting outside national jurisdiction); who are the people concerned (present and future civil society, or groups or individuals) and what is the *corpus* of the trust (designated resources only or the global commons of the whole environment)?[99]

This is a very original approach to trusteeship. However, in the view of the present author, some clarification may be required as to clear distinction between the notions of 'community', 'community of States' (as in Article 53 of the 1969 Vienna Convention on the Law of Treaties) and 'people'. Therefore, in order to achieve more clarity, a distinction should be made between these two notions, so as to indicate when and under what conditions people become 'community'. Further, Sand presents three options for the creation of an international environmental trust: a specific trust deed (designating a specific resource to be conserved for a beneficial purpose, such as the listing of protected areas under the World Heritage Convention); a treaty covering the entire category of trust resources in all members States (such as genetic resources included in Annex I to the FAO Plant Gene Treaty); and, finally, the 'objective' extension of a conventional regime to all States (*erga omnes*), not just the parties to the treaty by

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[98] *Ibid.*; Judge Weeramantry in his Separate Opinion in the *Gabčikovo-Nagymaros* case, used the term 'a principle of trusteeship of earth resources': *Case Concerning the Gabčikovo-Nagymaros Project (Hungary v. Slovakia)*, Judgment of 25 September 1997 (Separate Opinion of Judge Weeramantry), [1997] ICJ Rep. 88, at 102, 108, 110.

[99] Sand, *supra* note 87, at 55.

customary law, on the basis of objective natural criteria of the resource (it would, according to Sand, require some declaratory or customary specification of the international community's common concern, such as the deep seabed under the 1982 Convention, which is common heritage as a form of international trusteeship).[100]

As stated above, the concepts of trust in common law formed the basis of Professor Brown Weiss' theory of intergenerational equity, the central feature of which is the planetary trust. The legal form of such trust resembles to certain degree a charitable trust (it lacks the named beneficiaries and has no time limitations). A planetary trust applies to the present and future generations and is based on partnership between three generations: past, present and future. Each generation holds natural resources in trust for future generations. Future generations have a dual role: on one hand they are the beneficiaries; and on the other hand they are the trustees holding the Earth's natural resources for other generations to come. Intergenerational rights and obligations form a body of the theory of intergenerational equity or justice between generations.[101] By invoking justice between generations, Brown Weiss draws from Rawls's *Theory of Justice* (see above, *supra* note 1)[102] and his theory of the original position and the 'veil of ignorance'. The model of Brown Weiss refers to generations, not to individuals like Rawls' in theory. The planetary trust obliges generations to restore depleted resourses, not just not to deplete, like the obligations of trustees under private and charitable funds.[103]

VI. APPLICATION OF INTERGENERATIONAL EQUITY AT THE LEVEL OF NATIONAL COURTS

The principle of intergenerational equity was once successfully applied in practice, but in conjunction with the right to a healthful environment as enshrined in the Constitution of the Philippines in the famous 1993 *Minors Oposa* claim.[104] This case was originally a civil law class action filed in

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100 Sand, *supra* note 87, at 56.

101 Brown Weiss, *supra* note 13, at 405–408.

102 See also Barry I, *supra* note 2, at 276.

103 See Redgwell, *supra* note 2, at 75.

104 *Minors Oposa v. Secretary of The Department of Environment and Natural Resources (DENR)*, Supreme Court of the Philippines, 30 July 1993, 33 ILM (1994) 173; on the case see A. de la Viña, 'The Right to a Sound Environment: The Case of Minors Oposa v. Secretary of Environment and Natural Resources', 3 *RECIEL* (1994/IV) 246, at 246–52; A. Rest, 'Implementing the Principles of Intergenerational Equity and Responsibility',

the Philippines by minors who were plaintiffs against the Department of Environment and Natural Resources (the 'DENR'). The subject-matter of the action was a claim to cancel logging permits issued on basis of the Timber Licensing Agreements (the 'TLAs') and to cease issuing new ones, as they were the reasons for the continued deforestation (they remained effective for 25 years). The minors argued that they represented themselves as well as unborn generations. The cause of action was the constitutional right of balanced and healthful ecology, as enshrined in the Constitution of the Philippines. It was also argued that the refusal to cancel TLAs was in breach of other environmental laws of the Philippines, such as the Presidential Decree. The plaintiffs argued that the State should protect them in its role as *parens patriae.* The environmental right was pleaded on behalf of the minors and their successors.[105] In 1991, the judge issued an order which granted the defendant's motion to dismiss, on the ground that the plaintiffs had no cause of action and the issue was of a political character, which was in the realm of the legislative or executive branches of Government. The most important argument submitted by the judge against the admission of the claim was issue of breach of the fundamental constitutional law of non-impairment of contracts in the case of the cancellation of the TLAs.

The plaintiffs filed a special civil action for *certoriari* and requested the Supreme Court to rescind the above-mentioned order. They submitted that TLAs are not contracts, and therefore are not covered by the non-impairment law. The Respondent argued, *inter alia*, that the petitioners had failed to plead the specific environmental right and that the cancellation of the TLAs could not be done without due process of law, in which each and every holder of a TLA would be heard. The judges of the Supreme Court commented on the novel element of the petition: the representation of the petitioners' generation and the generations to come. The petitioners' legal argument for suing on behalf of future generations was based on the concept of intergenerational equity in so far as the right to a healthful environment was concerned. The Court said that:

> Each generation has a responsibility to the next to preserve that rhythm and harmony for the full enjoyment of a balanced and healthful ecology. . . . The minors' assertion of their right to a sound environment, at the same time, performance of their obligation to ensure the protection of that right for the generations to come.[106]

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26 *Environmental Policy and Law* (1994) 314, at 314–20; D. Gatmayan, 'Illusion of Intergenerational Equity: Oposa v. Factoran as Pyrrhic Victory', 15 *Geo. Int'l Envtl.L. Rev.* (2003) 457, at 457–86.

105 *Minors Oposa case*, *supra* note 104, at 181.

106 *Ibid.*, at 185.

The Supreme Court thus was of the view that responsibility towards following generations as regards maintaining the enjoyable ecology and the assertion of the right to a clean environment on their behalf, gave the petitioners *locus standi*.

The Court did not support the Respondents' argument that the petitioners had failed to assert a specific and definite right to be protected. It was of the view that they had presented, in a convincing manner, a right to a balanced and healthful ecology by relying on a number of the legal instruments, such as Sections 15 and 16 of Article II of the Constitution and Executive Orders of the Administrative Code. The judges, having analysed these instruments, came to the conclusion that the granting of TLAs was against the duties and functions of the DENR and damaging to the environment, and against the duty to preserve the environment for future generations. The Court also refused to accept the argument that the question was one of policy formulation, and thus squarely within the remit of the executive and legislative branches. It said that such a stringent view was not acceptable, especially in the light of Section 1 of Article VIII of the Constitution, which bestowed on the courts certain powers of scrutiny in relation to settling actual controversies involving rights which are legally demandable and enforceable. The Supreme Court made further statements as to the role of non-impairment of contracts. It noted that the Government cannot be bound indefinitely by TLAs, notwithstanding changes in other circumstances, such as welfare. Further, the Court said that the TLAs were not contracts, but licensing agreements, and therefore the non-impairment clause was not applicable. The case was referred to a court of first instance to review all existing TLAs.

The judgment of the Supreme Court was subject to several critical comments. First, quite serious critical observations were contained in the Concurring Opinion of Judge Feliciano (so fundamental that in fact his Concurring Opinion resembles a Dissenting Opinion). His observations concern *locus standi*, implying a legal interest which a plaintiff must have in the subject-matter of the suit. In this case, the class involved the broadest possible membership, as it:

> appears to embrace *everyone* living in the country whether now or in the future, it appears to me that everyone who may be expected to benefit from the course of action petitioners seek to require respondents to take, it vested with the necessary *locus standi*.[107]

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[107] *Minors Oposa case, supra* note 104 (Concurring Opinion of Judge Feliciano), at 200–201; (emphasis added).

The Court then in this case appeared to recognize a beneficiary's right of action, which presupposed the prior exhaustion of local remedies, an issue which was not discussed.[108] Judge Feliciano had objections to invoking the right to balanced and healthful ecology as the ground for this claim. It was not specific enough, '[i]t is in fact very difficult to fashion language more comprehensive in scope and generalised in character than the right to "a balanced and healthful ecology."[109] Therefore the petitioners had to show a more specific legal right, which was concrete enough to be violated by actions or failures to act. He was adamant that such right should be an operable right (to be clearly defined and thus possible to invoke easily in a court of law), rather than constitutional or statutory policy. Judge Feliciano gave two reasons why it should be a detailed right: the right should be specific enough to give defendants an opportunity to defend themselves effectively (the due process dimension); and, where the right in question was as broad as this Constitutional right, the courts would be forced into the 'uncharted ocean of social and economic policy making'.[110]

The issue of environmental human right as a policy statement was the subject of many other critical comments. Rest therefore argues that it is only a '"reflex-right" of an individual against the State to use its free discretion for reaching the political aims'.[111] From this follows only a discretionary power of a competent organ of a State to select the relevant policy in each and every case. This power did not bestow on an individual a specific human right against the authority in question to implement environmental policies. As a result thereof such right could not be used against third, private parties.[112] The same author mirrors the views of Judge Feliciano that the contents of such a right are too ill-defined and too broad to become operable and justiciable.[113]

As to the practical result achieved by the *Oposa* case, it must be stated that it did not bring about the cancellation of any timber licence agreements and it took three years for the judiciary to deal with this issue – one year in the lower court and two years in the Supreme Court. The Supreme Court did not order the cancellation of TLAs, but, as a matter of due process, ordered the case to be remanded for trial with TLAs holders as indispensable parties (evidence must have been shown against each and every TLA holder), while '[in] the meantime, Philippine forests continue to be denuded'.[114]

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108 *Ibid.*, at 201.
109 *Ibid.*
110 *Ibid.*, at 205.
111 Rest, *supra* note 104, at 318.
112 *Ibid.*
113 *Ibid.*
114 De la Viña, *supra* note 104, at 250.

Some authors are, however, very critical of the impact of and the results achieved by the *Oposa* case. Gatmayan argues that:

> Oposa adds barely anything new either to Philippines jurisprudence or to the cause of environmental protection, and that it has faded from the practice of law because it does not strengthen the legal arsenal for environmental protection.[115]

The above-mentioned author gives five reasons why this case does not deserve the praise and publicity it received:

1. No TLAs were cancelled, as the petitioners did not pursue the case;
2. The Supreme Court statement on *locus standi* to sue for future generations is not a binding precedent, as in effect it was an *obiter dictum*;
3. Even if 'standing' was an issue before the Supreme Court, the case law of the Philippines had assumed a liberal stand in relation to standing to sue. Therefore, the Court, by relying on the case law, could have either reached the decision that the children had standing to sue or waived the requirement completely. The same author observes that even if standing to sue for future generations becomes a standard legal doctrine, it is not guaranteed that it will lead to the protection of the environment. The court will have to rule on whether the challenged acts, have a detrimental effect on the environment (in the *Oposa* case the issue of TLAs had its effect on the right to a healthful environment).[116]
4. The invocation of the concept of intergenerational equity in the case was, in the words of this author, 'ultimately useless'. The Supreme Court would have decided this case precisely in the same manner had the children filed the case only on their own behalf. Gatmayan explains that:

   > In cases involving the protection of the environment, the distinction between present and future generations is inconsequential – we cannot protect the rights of future generations without protecting the rights of the present.[117]

5. In the particular case of the Philippines, the protection of the rights of future generations was already included in the law and jurisprudence before the entry in force of the 1997 Constitution and the *Oposa* case.

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115 Gatmayan, *supra* note 104, at 459.
116 *Ibid.*, at 459–60.
117 *Ibid.,* at 460.

Gatmayan ultimately sees the value of the case as lying not in the observations of the Supreme Court about the concept of future generations and their standing to sue, but rather in the fact that the Constitutional right to a healthful environment proved to be justiciable.[118] However, as the situation stands at present, 1.3 million of Philippine woodland are still covered by these agreements. The same author finally notes that this case ultimately became what Mr Oposa had hoped to avoid: pure rhetoric in invoking responsibility of future generations for the world's natural resources.[119]

There are many other instances of the concept of international equity having been invoked before the Indian and Bangladeshi courts, with very mixed results. As Razzaque observes, Indian courts mentioned this concept very seldom, and only in the context of the necessity to preserve the environment for present and future generations. She refers to cases dealing with areas of reserved forest, in which the court decided to base them on the needs of present and future generations and the rational use of natural resources. The notion of equity has been linked with this concept of public trust, as well as with the right of people to enjoy a healthy environment. However, in Pakistan, this concept was never applied. In Bangladesh, the courts rejected this concept on the ground that neither the constitution nor the national legislation of this country specifically mentioned it. The famous case of *Vellore Citizens' Welfare Forum* refers to the Brundtland Commission's definition of sustainable development, which included the concept of future generations. In *People United for Better Living in Calcutta v. State of West Bengal*, the court stated that there is a responsibility of the present generation to posterity 'for their proper growth and development as to allow posterity to breathe normally and love in a cleaner environment and have consequent fuller development'. In the *J. Jagannath* case, the court dealt with commercial shrimp farming. It stated that a strict environmental test is needed before the grant of permission for such farming in a sensitive coastal area. It said that there must be a compulsory environmental impact assessment, which would take into account intergenerational equity and the cost of rehabilitation. As regards Bangladesh, Razzaque writes that the Court in 1995 and 1996 mentioned intergenerational rights in two cases but did not dwell on their the exact legal nature. In *M.Farooque v. Bangladesh and Others* the petitioners submitted that they were representatives not only of their own generation but of the generations to come. The court rejected this argument. The petitioner relied on the *Minors Oposa* case. The court was of the view that minors had *locus*

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[118] *Ibid.*
[119] *Ibid.*, at 485.

standi before the court in the Philippines, since in the Constitution of the Philippines the right to a balanced and healthful ecology was a fundamental right. In addition several laws in the Philippines declared that it was the State's policy to conserve the forests of that country for not just the present generation but future generations, as well. However, the Constitution of Bangladesh does not have such a right.[120]

VII. PRACTICAL APPLICATION OF INTERGENERATIONAL EQUITY AT THE LEVEL OF INTERNATIONAL COURTS

At the international level Judge Weeramantry was a prominent advocate of the rights of future generations, such as in the 1995 *Nuclear Test II* case in the International Court of Justice.[121] He was of the view that the Court

> must regard itself as a trustee of those (intergenerational rights) in the sense that a domestic court is a trustee of the interests of an infant to speak for itself. If this Court is charged with administering international law, or has already done so, this principle is one which must inevitably be a concern of this Court. This consideration involved is too serious to be dismissed as lacking in importance merely because there is no precedent on which it rests.[122]

The Court as such dealt with this question in the *Nuclear Weapons Advisory Opinion,* in which it said as follows:

> The Court recognises that the environment is under threat and that the use of nuclear weapons could constitute a catastrophe for the environment. The Court also recognises that the environment is not an abstraction but represents the living space, the quality of life and very health of human beings, including generations unborn. The existence of the general obligations of States to ensure that their activities within their jurisdiction or control respect the environment of other States or areas beyond national jurisdiction is not part of the corpus of international law relating to the environment (para.29) . . . [t]he destructive power of nuclear weapons cannot be contained in either space or time. They have the potential to destroy all civilisation and the entire ecosystem of the planet . . . Further, the use of nuclear weapons could be a serious danger to

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120 J. Razzaque, 'Human Rights and the Environment. National Experiences', 32 *Environmental Policy and Law* (2002) 99, at 105.

121 *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*, Order of 22 September 1995 (Dissenting Opinion of Judge Weeramantry) [1995] ICJ Rep. 317, at 317–62 (hereinafter *Nuclear Tests Case II*).

122 *Ibid.,* at 317.

> future generations. Ionising radiation has the potential to damage the future environment, food marine ecosystem, and to cause genetic effects and illnesses to future generations (para. 55) . . . in order correctly to apply to the present Charter law on the use of force and the law applicable in armed conflict, in particular humanitarian law, it is imperative for the Court to take account of the unique characteristics of nuclear weapons, and in particular their destructive capacity, their capacity to cause untold human suffering and their ability to cause damage to generations to come (para.36).

However the opinion of the Court raised certain dissatisfaction, as [t]he Court, however, stopped far short of explicitly relying on a principle of intergenerational equity or for recognising explicitly the rights of future generations.[123]

Further, future generations merited a mention in the 1997 *Gabčikovo-Nagymaros Project*.[124]

The Court said as follows:

> It is clear that the Project's impact upon, and its implications for, the environment are of necessity a key issue. The numerous scientific reports which have been presented to the Court by the Parties – even if their conclusions are often contradictory – provide abundant evidence that this impact and these implications are considerable. In order to evaluate the environmental risks, current standards must be taken into consideration. This is not only allowed by the wording of Articles 15 and 19, but even prescribed, to the extent that these articles impose a continuing – and thus necessarily evolving – obligation on the parties to maintain the quality of the water of the Danube and to protect nature. The Court is mindful that, in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage. Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon the environment. Owing to new scientific insights and to a growing awareness of the risks for mankind – for present and future generations – of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past. This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development.

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[123] E. Brown Weiss, 'Opening Doors to the Environment and to Future Generations', in L. de Chauzournes and P. Sands (eds), *International Law, International Court of Justice and Nuclear Weapons* (1999) 338, at 349–50.

[124] *Case Concerning the Gabčikovo-Nagymaros Project (Hungary v. Slovakia)*, Judgment of 25 September 1997 [1997] ICJ Rep. 7, at 77–8, para. 140.

> For the purposes of the present case, this means that the Parties together should look afresh at the effects on the environment of the operation of the Gabcíkovo power plant. In particular they must find a satisfactory solution for the volume of water to be released into the old bed of the Danube and into the side-arms on both sides of the river.

The Court's invocation of the concept of intergenerational equity appears to be confined only to considering it as one of the factors to be taken into account in relation to environmental issues. This concept certainly does not emerge as a decisive element in the ICJ's jurisprudence. The lack of the opportunity to apply this concept before courts and tribunals makes it rather impractical and even, as Professor Boyle described it, 'widely unrealistic'.[125] In his many Individual Opinions, Judge Weeramantry was a great supporter of the rights of future generations. For example in the above-described Advisory Opinion on the *Threat or Use of Nuclear Weapons*, one of the arguments against them was damage to future generations, which in fact was closely related to damage to the environment. He wrote:

> The effects upon the eco-system extend, for practical purposes, beyond the limits of all foreseeable historical time. The half-life of one of the by-products of nuclear explosion – plutonium 239 – is over twenty-thousand years. With a major nuclear exchange it would require several of these 'half-life' periods before the residuary radioactivity becomes minimal . . . At any level of discourse, it would be safe to pronounce that no generation is entitled, for whatever purpose, to inflict such damage on succeeding generations. The Court as the principal organ of the United Nations, empowered to state and apply international law with an authority to match by no other tribunal must, in its jurisprudence, pay due recognition to rights of future generations. If there is any tribunal than can recognise and protect their interests under the law, it is this Court. It is to be noted in this context that the rights of future generations have passed the stage when they were merely an embryonic rights struggling for recognition. They have woven themselves into international law through major treaties, through juristic opinion and through general principles of law recognised by civilised nations . . . All of these expressly incorporate the principle of protecting the natural environment for future generations, and elevate the concept to the level of binding state obligation.[126]

This statement of Judge Weeramantry will be commented upon below. Judge Weeramantry has proved to be a staunch supporter of the Court

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[125] A.E. Boyle, 'Review of the Book of Brown-Weiss', 40 *ICLQ* (1991) 230, at 230.

[126] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion of 8 July 1996 [1996] ICJ Rep. 429, at 492 et seq.; he gives numerous examples of the treaties which include an element of 'future generations', such as the 1972 London Convention, the 1973 Convention on International Trade in Endangered Species of Fauna and Flora (the CITES) and the 1972 World Heritage Convention.

regarding its role towards future generations, in particular the Court as the trustee of future generations.

Apart from the critical comments relating to the philosophical foundations of Brown Weiss' theory, practical difficulties are encountered as far as questions of implementation or enforcement are concerned. Brown Weiss relies on parallels with national institutions in these matters, a methodological approach which, as a matter of principle, often lends itself to serious criticism. She particularly favours the appointment of an ombudsman, who would represent future generations in international negotiations, as well as in the proceedings before the Court in a case of breach of trust. In particular the role of a negotiator for future generations in such an international context appeared to be widely assumed to be impractical.[127] It is rather difficult to envisage (if not improbable) that such an ombudsman would have a strong negotiating position, faced with frequently insurmountable difficulties concerning the negotiation of international environmental agreements on present issues as well as already existing and various, often irreconcilable, differences. The standing of such an ombudsman representing unborn generations in judicial proceedings is somewhat dubious as well. In general, the legal position of unborn generations is very controversial. As was clearly evidenced by the *Oposa* case certain legal issues identified by Judge Feliciano remain unresolved (such as the *locus standi* of unborn generations and the problem of the legal interest and the cause of action).

As it was pointed out above, the *Nauru* case is an example of the presence of both elements of the Brown Weiss theory, i.e. corrective and distributive justice (intergenerational justice and trust). The Trusteeship Agreement for the Territory of Nauru was approved by the General Assembly in 1947. The key provision of this Agreement (Article 3) was to impose on the Administering Committee an obligation to administer in such a way as to achieve a basic objective of the International Trusteeship system, as set out in Article 76 of the UN Charter. Article 5 of the Agreement made direct reference to present and future generations of Nauru:[128]

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[127] See, e.g., P.W. Birnie, 'International Environmental Law; Its Adequacy for Present and Future Needs', in A. Hurrell and B. Kingsbury (eds), *The International Politics of the Environment: Actors, Interests and Institutions* (1992) 51, at 72.

[128] As noted above, the nature of the trusteeship agreement was already analysed by Redgwell. Suffice it to say that, as observed in the Memorial presented on behalf on Nauru:

'[t]here can be no doubt that the principle established during the United Nations Conference on International Organisation, and embodied in Article 76 of the Charter, was

> The Administering Authority undertakes that in the discharge of its obligations under Article 3 of this Agreement . . . it will, in accordance with its established policy: (a) take into consideration the customs and usages of the inhabitants of Nauru and respect the rights and safeguard the interests, both present and future, of the indigenous inhabitants of the Territory; and in particular ensure that no rights over the native land in favour of any person not an indigenous inhabitant of Nauru may be created or transferred except with the consent of the competent public authority.[129]

We may say that the alleged depletion of the natural resources of Nauru interfered with the rights of future generations:[130]

> the resources were there, but as a result of a deliberate policy they were not made available, and consequently the advances made, for example in education, were not related to the legal entitlement of the Nauruan community to access to the financial benefits of the phosphate industry. Political and economic advancement would have provided access to those benefits and a proportionate increase in expenditure on education and other services.[131]

The case indeed involved many issues which have a bearing on generations to come, such as special funds established to secure the rights of present and future generations of Nauruan peoples. These funds were as follows:

1. for the resettlement of the Nauruan population;
2. for the royalties paid to the long-term trust funds;
3. for the transfer of the phosphate operation; and
4. for the rehabilitation of the worked-out land.[132]

Trust funds provided for under the Trusteeship Agreement were meant to secure the future 'in terms of foreseeable long-term needs',[133] whilst,

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based on the broad concept of trusteeship reflecting the general institutions of guardianship and curatorship.'

Case Concerning Certain Phosphate Lands in Nauru (Nauru v. Australia), Memorial of the Republic of Nauru, para. 263, text available online at: http://www.icj-cij.org/docket/files/80/6655.pdf (last visited on 6 December 2007).

129 Memorial of the Republic of Nauru, *supra* note 128, at para. 394.

130 *Ibid.*, at para. 393.

131 *Ibid.*

132 *Case Concerning Certain Phosphate Lands in Nauru (Nauru v. Australia)*, Oral Proceedings, Preliminary Objections, Public sitting held on Monday 11 November 1991, at 10 a.m., at the Peace Palace, President Sir Robert Jennings presiding, CR1991/15, Oral pleadings of Mr Arechaga, at 36–37; text available online at: http://www.icj-cij.org/docket/files/80/5769.pdf (last visited on 6 December 2007).

133 Memorial of the Republic of Nauru, *supra* note 128, at para. 371.

according to Brown Weiss' theory, all arrangements were made to be applicable to abstract future generations, not defined by or confined to any time parameters. As Mr Keke said during oral pleadings, '[a]ll this clearly shows how vital a role income from phosphate plays in the current and future requirements of the Nauruan economy'[134] and that:

> Nauruans are very much attached to their lands. Their customary law determines the nature and extent of land rights and their transmission upon the death of a landowner. Even the extent of which is fully recognized in the courts. Ownership to land and ownership to phosphate are indivisible and indistinguishable. To an ordinary Nauruan, income from phosphate is part and parcel of the land, as it arises from the land. In the same sense, the funds held by the Nauru Phosphate Royalties Trust are closely intertwined with this concept of ownership to phosphate land.[135]

However, the exploitation of phosphates resulted in environmental and land degradation, which again has an impact on future generations. Therefore it was necessary to introduce the rehabilitation process (the establishment of the Rehabilitation Fund), which was one of the contentious issues in this case. In fact it was noted in the Applicant's Memorial that:

> Given the extremely recalcitrant environment created by phosphate mining in Nauru, the extensive character of the mining, the fact that the homeland of the indigenous people of Nauru has been threatened in terms of its physical integrity, and the fact that the Nauruans have a very strong sense of national identity, the failure to make provisions for rehabilitation represents at once a serious affront to the vital interests of Nauru, a major drawback to the condition of independent statehood, and also a threat to the future economic needs of the people of Nauru. Consequently, the context of phosphate mining is not comparable with the normal context of the rehabilitation of land affected by mining operations.[136]

However, the standing of future (unborn) generations before the International Court of Justice poses the same unresolved problems as standing before the national courts (as evidenced by the *Minors Oposa* case). There are several legal issues which constitute a serious obstacle to

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[134] *Case Concerning Certain Phosphate Lands in Nauru (Nauru v. Australia)*, Oral Proceedings, Preliminary Objections, Oral Arguments on the Preliminary Objections – Public sitting held on Friday 15 November 1991, at 10 a.m., at the Peace Palace, President Sir Robert Jennings presiding, CR1991/18, Oral pleadings of Mr Keke at 21; text available online at: http://www.icj-cij.org/docket/files/80/5775.pdf (last visited on 6 December 2007).

[135] *Ibid.*, at 22.

[136] Memorial of the Republic of Nauru, *supra* note 128, at para. 489.

the practical application of this concept. On what legal grounds can the interests of unborn generations be put forward? Is it in the form of surrogates who represent future interests in negotiations; or perhaps trustees with the *locus standi* to represent the interests of future generations in judicial proceedings?[137] Standing of trustees, it has been suggested, may be based on the *actio popularis* or on obligations *erga omnes*. The difficulties, however, with this basis for standing in judicial proceedings, at least before the ICJ, are currently impossible to circumvent. This concept not only suffers from, as it seems, insurmountable procedural problems, but it also does not have a clear normative content. As Lowe observes, the ensuing duty of States to preserve the environment for future generations is also very fuzzy and lacking ways in which duties would be distributed between States in a manner which would secure the interests of future generations equally in all States. At present international law does not have such a suitable mechanism.

VIII. FUTURE GENERATIONS IN CONSTITUTIONAL AND NATIONAL CONTEXTS

A. Constitutional Context

Several constitutions of various States contain the provisions referring to future generations. Tremmel is of the view that this is one of the manifestations of intergenerational justice.[138] He distinguished three types of clauses relating to intergenerational justice: general clauses,[139]

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[137] J.C. Wood, 'Intergenerational Equity and Climate Change', 8 *Geo. Int'l Envtl.L. Rev.* (1996) 297, at 302–303; see similarly V. Lowe, who says as follows: '[b]lur the implications of trusteeship have not been drawn out. Who are the beneficiaries? What are their rights of action? What are the duties of the trustees?': V. Lowe, *supra* note 67, at 27.

[138] Tremmel, *supra* note 51, at 187–229.

[139] *Ibid.*, at 191. There are several examples of such clauses: Poland: Preamble to the Constitution: 'Recalling the best traditions of the First and the Second Republic, obliged to bequeath to future generations all that is valuable from our over one thousand years' heritage'; Switzerland: Preamble to the Federal Constitution: 'In the name of God Almighty! Whereas, we are mindful of our responsibility towards creation; . . . are conscious of our common achievements and our responsibility towards future generations; . . .'; Estonia: Preamble,

> Unwavering in their faith and with an unswerving will to safeguard and develop a state;[. . .]which shall serve to protect internal and external peace and provide security for the social progress and general benefit of present and future generations; . . . the Estonian people adopted . . . the following Constitution ;

Tremmel, *supra* note 51, at 192.

ecological generational justice[140] and financial generational justice.[141] Tremmel approaches intergenerational justice extensively as he also

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[140] Numerous constitutions contain such clauses, e.g.: Argentina, Article 41, clause 1:

'All inhabitants are entitled to the right to a healthy and balanced environment fit for human development in order that productive activities shall meet present needs without endangering those of future generations; and shall have the duty to preserve it. As a first priority, environmental damage shall bring about the obligation to repair in according to law.'

Czech Republic, Article 7: 'The State shall attend to a prudent utilisation of natural resources and to protection of national wealth';
Germany, Article 20a

'Mindful also of its responsibility toward future generations, the State shall protect the natural bases of life by legislation and, in accordance with law and justice, by executive and judicial action, all within framework of the constitutional order;'

Poland, Article 74 Clause 1 of the Constitution: 'Public authorities shall pursue policies ensuring the ecological security of current and future generations'; Sweden, Chapter 1, Article 4: 'The public institutions shall promote sustainable development leading to a good environment for present and future generations'; South Africa:

'Everyone has the right a) to an environment that is not harmful to their health or well-being; and b) to have the environment protected, for the benefit of present and future generations, through reasonable legislature and other measures that prevent pollution and ecological degradation, promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development;'

Hungary, Article 15: 'The Republic of Hungary recognises and shall implement the individual's right to a healthy environment'.

[141] These are, e.g., the following: Estonia, Article 116:

'Proposed amendments to the national budget or to its draft, which require a decrease in income, an increase of expenditures, as prescribed in the draft national budget, must be accompanied by the necessary financial calculations, prepared by the initiators, which indicate the sources of income to cover the proposed expenditures;'

Germany, Article 109, clause 2: 'In managing their respective budgets, the Federation and the Länder shall take due account of the requirements of the overall economic equilibrium' and Article 115:

'Revenue obtained by borrowing shall not exceed the total of investment expenditures provided for the budget; exceptions shall be permissible only to avert a disturbance of the overall economic equilibrium. Details shall be regulated by a federal law;'

Poland, Article 216, clause 5:

'It shall be neither permissible to contract loans not provide guarantees and financial sureties which would engender a national public debt exceeding three-fifths of the value of the annual gross product. The method for calculating the value of the annual gross domestic product and national public debt shall be specified by statute.'

includes the right to a clean environment in the same category. In his very thorough survey of constitutions he refers as well e.g. to the Constitution of Hungary, Article 15 of which states as follows: '[t]he Republic of Hungary recognises and shall implement the individual's right to a healthy environment'. The Constitution of South Africa includes both the human right to a clean environment, and generational justice.[142] There are a growing number of constitutions in which such a right is justiciable and enforceable. The leading country in this respect is South Africa, where the Constitutional right to a clean environment is directly justiciable and belongs to economic, social and cultural rights. The South African Constitution also provides for a human right to food and water.[143] Both rights were the subject of several judgments of the Constitutional Court of South Africa. However, the judgments referred to human rights of existing individuals, not future generations.[144] The *Minors Oposa* case is the only existing example of a case in which the constitutional right to a clean environment and intergenerational justice converged. All other attempts to follow the example of the *Oposa* case failed. Therefore, it may be observed that, even if we accept the view that the general constitutional right to a clean environment has an intergenerational element, its application by the courts refers only to the individual environmental (human) rights which were the subject of the court's proceedings.

The concept of sustainable development has an intergenerational aspect, which constitutes an indispensable element of the classical Brundland definition: 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. It is

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[142] See in depth on the issue of constitutional human rights, T. Hayward, *Constitutional Environmental Rights* (2005) and E. Brandl and H. Bungert, 'Constitutional Entrenchment of Environmental Protection: A Comparative Analysis of Experiences Abroad', 16 *Harvard Environmental Law Review* (1992) 1, at 1–100.

[143] Article 27 Health care, food, water and social security

1. Everyone has the right to have access to
   a. health care services, including reproductive health care;
   b. sufficient food and water; and
   c. social security, including, if they are unable to support themselves and their dependants, appropriate social assistance.
2. The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights.
3. No one may be refused emergency medical treatment

[144] See, e.g., *Republic of South Africa v. Grootboom Case*, CCT/11/00.2000 (11) BCLR 1169, Constitutional Court of South Africa, 4 October 2000. On the case see J. Fitzpatrick and R.C. Slye, 'International Decisions', 97 *AJIL* (2003) 669, at 669–73.

also included in several Constitutions.[145] The constitutional effectiveness of these provisions also raises doubts. In Poland it remains a general political statement, and in France its effectiveness cannot be assessed at present, as the passage of some time will be required before it can be judged.[146] Bourg asserts that the 2004 Environmental Charter will be 'either effective rapidly or not effective all, given the relative urgency of addressing our ecological impasses'.[147] The same author further assesses the effectiveness of the Charter in the light of the French procedure for referring a matter to the Constitutional Council, which is very restrictive (a law can be submitted only before it is promulgated and referral requires the signatures of at least 60 members of the parliament). Bourg therefore rightly observes that '[t]he potentially remedial role of a text such as the Charter under such conditions is virtually inexistent, unless one counts on the ecological vigilance of 60 parliamentarians, which for the moment is nonexistent'.[148]

The constitutional role of sustainable development in an intergenerational concept has to be evaluated on a case-by-case basis. In Poland it is a very general concept, which cannot be applied solely on the basis of the Constitution. However, as will be shown, in Israel the situation is different to a certain extent.[149]

The rights of future generations can be protected through institutions, as for example the Commission for Future Generations in the Knesset (Israeli Parliament), which has rather broad competence.[150] This Commission has the powers to examine each legislative act wherever there is a suspicion of possible prejudice to future generations. The Commission has been granted two major authorities: the authority to demand information from any controlled establishment under the State Comptroller Act and the authority to

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[145] Constitution of Poland: Article 5 says:

> 'The Republic of Poland shall safeguard the independence and integrity of its territory and ensure the freedoms and rights of persons and citizens, the security of the citizens, safeguard the national heritage and shall ensure the protection of the natural environment pursuant to the principles of sustainable development;'

Article 6 of the 2004 Environmental Charter (law passed in 2005 by the Parliament, which the amendment to the Constitution of France): 'Public policies shall promote sustainable development. To this end, the reconcile protection and utilisation of the environment, economic development and social progress.'

[146] D. Bourg, 'The French Constitutional Charter for the Environment: an Effective Instrument?', in J.C. Tremmel (ed.), *Handbook of Intergenerational Justice* (2006) 230, at 235, *supra* note 2.

[147] *Ibid.*, at 239.

[148] *Ibid.*, at 239–40.

[149] S. Shoham and N. Lamay, 'Commission for Future Generations', in Tremmel (ed.), *supra* note 2, 244, at 244–79.

[150] *Ibid.*, at 247 et seq.

request a parliamentary committee which discusses a bill to take into consideration the position presented by the Commissioner.[151] The main task of the Commission is to define who the future generations are.[152] It must be noted that the terms 'future generations' and 'special interest of future generations' were not defined in the bill establishing the Commission.

The Commission established its role as the protector of the current generation of children. According to Shoham and Lamay, the 'Commission preferred to consider future generation as the next baby to be born tomorrow morning, a definition that relates to the immediate future generation, consisting of currently existing children'.[153] The concept of the special interest of future generations proved to be a difficult issue to settle. Eventually, sustainable development was adopted by the Commission as the conceptual platform for the defining of the term.[154] On the initiative of the Commission, a new legislative process was set in motion to make sustainable development a protected constitutional right.[155] The concept of future generations penetrated all levels of governance due to the activities of the Commission. In the words of Shoham and Lamay, '[t]he Commission's most crucial role is thus to create enabling frameworks and to pass on values and knowledge as a different dimension of "thinking future"'.[156]

The Commission for Future Generations in the Knesset is a revolutionary body, the first of this type in the world. However, it must be observed that it protects the rights of existing children and those of successive generations of children – 'the next baby born tomorrow'. Therefore, its intergenerational aspect is rather limited. It may be observed, however, that attempts to establish the Ombudsman for Future Generations in other

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151 *Ibid.*, at 247.

152 *Ibid.*, at 251. The 2001 Knesset Law (Amendment on the Commission for Future Generations) set out as follows the role of the Commissioner for Future Generations:

> 'i. Will give his assessment of bills debated in the Knesset which he considers to have particular relevance for future generations; ii. Will give his assessment of secondary legislation brought for authorisation of one of the Knesset Committees or for consultation with one of the Knesset committees, which he considers to have special relevance for future generations; iii. Will present reports to the Knesset from time to time, at his discretion, with recommendations on issues with particular relevance for future generations; iv. Will advise MK on issues with particular relevance for future generations; v. Will present to the Knesset, once a year, a report on his activities in accordance with this law.'

Cited in Shoham/Lamay, *supra* note 149, at 265.

153 *Ibid.*, at 252.

154 *Ibid.*, at 254.

155 *Ibid.*, at 255.

156 *Ibid.*, at 262.

countries, such as Hungary, were not met with success, and reasons of a different nature, both political and economic were put forward against such an organ.[157]

B. The Marshall Islands Funds and Claims Tribunal: General Framework

An example of the intergenerational approach may possibly be found in the nexus of agreements and arrangements in certain national and international legal instruments relating to the Marshall Islands,[158] not a widely known fact. The intergenerational aspect of nuclear testing was raised by Judge Weeramantry in his Dissenting Opinion in the 1995 *Nuclear Test Case II*.[159] He said:

> The case before the Court raises, as no case ever before the Court has done, the principle of intergenerational equity – an important and rapidly developing principle of international law . . . [I]f the damage of this kind alleged has been inflicted on the environment by the people of the Stone Age, it would be with us today. Having regard to the information before us that the half-life of a radioactive by-product of nuclear tests can extend to over 20,000 years, this is an important aspect that international tribunal cannot fail to notice. In a matter of which it is duly seised, this Court must regard itself as a trustee of those rights in the sense that a domestic court is a trustee of the interests of an infant unable to speak for itself . . . New Zealand's complaint that its rights are affected does not relate only to the rights of people presently in existence. The rights of the people of New Zealand include the rights of unborn posterity. Those are the rights which a nation is entitled, and indeed obliged, to protect.[160]

The majority of these arrangements relate to the long-lasting effects of nuclear testing and their impact on present and future generations. In the

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[157] See on this in depth B. Javor, 'Institutional Protection of Succeeding Generations – Ombudsman for Future Generations in Hungary', in Tremmel (ed.), *supra* note 2, 282, at 282–98.

[158] The Marshall Islands (official name the Republic of the Marshall Islands (RMI)) is a Micronesian nation in the western Pacific Ocean located north of Nauru and Kiribati, east of the Federated States of Micronesia. The country consists of 29 atolls and 5 isolated islands. The RMI is governed by the mixed parliamentary–presidential system. The legislature of the RMI the so called 'Nitijela', is bi-cameral. The upper house of the Nitijela (the so-called Council of Iroij) is an advisory body comprising 12 tribal chiefs. The executive branch consists of the President and the Presidential Cabinet (10 minsters appointed by the President with the approval of the Nitijel.

[159] *Nuclear Tests Case II*, *supra* note 121, at 288; *Nuclear Tests Case II*, *(Dissenting Opinion of Judge Weeramantry), supra* note 121, at 341; see also *Nuclear Tests Cases (Australia v. France) and (New Zealand v. France)*, Judgment of 20 December 1974 [1974] ICJ Rep. 253, at 253–74.

[160] *Nuclear Tests Case II (Dissenting Opinion of Judge Weeramantry)*, *supra* note 121, at 341.

territory of the Marshall Islands, the United States conducted its Nuclear Testing Programme which resulted in 67 atmospheric nuclear tests in the period from 30 June 1946 to 18 August 1958.[161] It may be noted that during this period the US was a Trustee under the United Nations Trusteeship Agreement. After the Marshall Islands gained independence, the 1986 Compact of Free Association (the Compact) was concluded between the United States and the Republic of Marshall Islands (the RMI) as an independent State,[162] after the conclusion of the Trusteeship Agreement, under which the US acted as a Trustee on behalf of the Trusteeship Council of the United Nations. One of the provisions of this agreement was to, *inter alia,* protect the health of the inhabitants of the Marshall Islands and to protect them against the loss of their lands and resources.[163] Most of the nuclear testing was conducted by the US during the period of the Trusteeship Agreement.[164] In implementation of the Compact, the US and the RMI concluded 14 agreements on the basis of which the US pledged to provide vast economic assistance for the RMI, and the RMI in turn consented to the US keeping its military bases and installations on the territory of the RMI.[165] The Compact of Free Association provided for two forms of compensation: under the legal settlement (the establishment of the Nuclear Claims Tribunal is the legal settlement) and *ex gratia.*

Section 177 of the Compact of Free Association (hereinafter 'Section 177 Agreement') forms the basis of this agreement and reads:

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[161] The most powerful of those tests was the 'Bravo' shot, a 15 megaton device detonated on 1 March 1954 at Bikini atoll. This test was equivalent to 1000 Hiroshima bombs, and the total yield of all 67 tests was 108 megatons – the equivalent of more than 7000 Hiroshima bombs. Although the number of tests conducted in the Marshall Islands represents only about 14% of all US tests, the yield of the tests in the Marshalls comprised nearly 80% of the atmospheric total detonated by the US: see the Nuclear Claims Tribunal website: http://www.nuclearclaimstribunal.com/testing.htm#testlist (last visited on 6 December 2007).

[162] Compact of Free Association (included in US Pub. Law 99-239, Compact of Free Assoc. Act of 1985, 48 USC 1681 note. 59 Stat. 1031 and amended in 2003). It includes the following titles: Title 1: Governmental Relations; Title 2: Economic Relations; Title 3: Security and Defence Relations; and Title 4: General Provisions.

[163] Trusteeship Agreement for the former Japanese Mandated Islands, 8 UNTS (1947) 189.

[164] D. Thornburgh et al., 'The Nuclear Claims Tribunal of the Republic of the Marshall Islands: An Independent Examination and Assessment of Its Decision-Making Process' (2003), at 9, available online at: http://www.bikiniatoll.com/ThornburgReport.pdf (last visited on 6 December 2007); in response to the US Government concerns that the Nuclear Claims Tribunal (NCT) was operating without transparency, the RMI Government in 2002 asked the former US General Attorney General, Richard Thornburgh, independently to assess the procedures of the NCT.

[165] Thornburgh et al., *supra* note 164, at 9.

> the US recognized the contributions and sacrifices made by the people of the Marshall Islands in regard to the Nuclear Testing Program and accepted the responsibility for compensation owing to citizens of the Marshall Islands for loss or damage to property and person resulting from that testing.[166]

In the view of the present author this Agreement has an intergenerational aspect to it.

In general terms, *via* the Section 177 Agreement, the United States provided to the Marshall Islands the sum of US $150 million as a financial settlement for the damage caused by the nuclear testing programme. That money was used to create a fund intended to generate US $270 million for distribution over a 15-year period with average annual proceeds of approximately US $18 million per year. These funds were distributed among the peoples of Bikini, Enewetak, Rongelap and Utrik for medical and radiological monitoring and the payment of claims. The Section 177 Agreement also provided for the establishment of a Claims Tribunal with jurisdiction to:

> render final determination upon all claims past, present and future, of the Government, citizens and nationals of the Marshall Islands which are based on, arise out of, or are in any way related to the Nuclear Testing Program.[167]

The Marshall Islands Nuclear Claims Tribunal was established in 1988. The Tribunal compensated the following: personal injuries deemed to have resulted from the nuclear testing programme (the 1991 programme which resulted by the end of 2003 in the award of more than US $83 million, with additional compensatable claims are being filed on a regular basis) and property damage awards in class actions by the people of Enewetak Atoll and the people of Bikini Atoll. The pending property claims from the peoples of Rongelap and Utrik Atolls near completion, while the people of Ailuk Atoll have recently filed a class action claim for compensation. During the first 15 years of the Compact only US $45.75 million were made available for the actual payment of awards, and less than US $6 million of the initial US $150 million now remained in the Nuclear Claims Fund. Therefore 'it has become clear that the original terms of the settlement agreement are manifestly inadequate'.[168]

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[166] See http://www.nuclearclaimstribunal.com (last visited on 6 July 2008); this Agreement was concluded for a period of 15 years (1986–2001), which included provision for an extension for a two-year renegotiation period up until 2003.

[167] *Ibid.*

[168] *Ibid.*

1. Agreement for the Implementation of Section 177 of the Compact of Free Association (hereinafter 'Section 177 Agreement')

The generational aspect of the Section 177 Agreement is already evident in its Preamble, which states as follows:

> *In recognition* of the authority and responsibility of the Government of the Marshall Islands to provide medical and health care to all of the people of the Marshall Islands; and the expressed desire of the Government of the Marshall Islands to include in its integrated, comprehensive and universal medical health-care system, the health-care and surveillance programs and radiological monitoring activities contemplated in United States Public Law 95–134 and United States Public Law 96–205; *In recognition* of the authority and responsibility of the Government of the Marshall Islands to provide for the welfare of all the people of the Marshall Islands; and the expressed desire of the Government of the Marshall Islands to create and maintain, in perpetuity, a means to address past, present and future consequences of the Nuclear Testing Program, including the resolution of resultant claims; and *In recognition* of contributions and sacrifices made by the people of the Marshall Islands in regard to the Nuclear Testing Program.[169]

The Preamble refers not only to claims resulting from nuclear tests but also to 'future consequences of the Nuclear Testing Programme' and to the general welfare of the people of the Marshall Islands. Article 1 of Section 1 of the Section 177 Agreement creates a fund (hereinafter 'the Fund'):

> In fulfilment of its obligations under Section 177 of the Compact, the Government of the United States shall provide to the Government of the Marshall Islands, on the effective date of this Agreement, the sum of $150 million to create a fund.

The above amount was the principal and the investment returns on the Fund were expected to generate US $270 million, in the period between 1986 and 2001.

The generational aspect of the Fund is confirmed by Article 1 Section 2 (Management), according to which it was created 'in furtherance of the desire of the Government of the Marshall Islands to provide, in perpetuity, a means to address past, present and future consequences of the Nuclear Testing Program'.[170] The Fund is regulated by the following strict financial framework:

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[169] Preamble to the 177 Agreement, available online at: http://www.nuclearclaimstribunal.com (last visited on 6 December 2007).

[170] *Ibid.*, Article 1 Section 2. Prior to the establishment of the Tribunal, 14 different groups of litigants on behalf of approximately 5000 inhabitants of the Marshall Islands brought cases before the Court of Claims against the United States to recover damages which purported to result from the Nuclear Testing Programme. Claims were also brought to the

(a) The Government of the Marshall Islands shall cause the Fund to be invested with the performance goal of producing for each year of the existence of the Fund average annual proceeds of at least $18 million (Annual Proceeds) for disbursement in accordance with this Agreement
(b) The Government of the Marshall Islands, in order to achieve the performance goal of the Fund, shall retain as trustee and manager of the Fund (Fund Manager) a United States investment management company which has demonstrated substantial experience in the administration of trusts and which has funds under management in excess of $1 billion. The Fund Manager shall make disbursements in accordance with the provisions of this Agreement to the designated recipients in the name of 'The Republic of the Marshall Islands Nuclear Claims Fund'.
(c) The Fund shall be invested in bonds, notes and other instruments of investment grade and of United States nationality, including both debt and equity issues, common or preferred stocks, money market funds, certificates of indebtedness and mutual funds. The Government of the United States shall impose no transaction fee or intermediary charge on the investment of the Fund in instruments of the Government of the United States.
(d) Except as may be otherwise required by this Agreement and to achieve its desire to provide a perpetual means of addressing the special needs and unique circumstances of the people of the Marshall Islands resulting from the Nuclear Testing Program, the Government of the Marshall Islands shall not permit nor shall the Fund Manager make disbursements from the Fund.
(e) For purposes of taxation only, the trust into which the Fund is placed pursuant to this Article shall be deemed to be a charitable trust under the laws of the United States and the Republic of the Marshall Islands.[171]

Court from the inhabitants of the atolls of Bikini and Enewetak, as well as inhabitants of atolls and islands which were not used for atomic testing. The cases were suspended pending the negotiation of the Compact of Free Association. Finally, the Court of Claims concluded that in light of the Section 177 Agreement, it was premature to decide on the arguments presented by both parties, and the issue whether the alternative procedures provided by the Congress were adequate would depend on the amount and type of compensation. Due to the withdrawal by Congress of the jurisdiction of the Court, the case was dismissed by the Court: see in detail T. Lum et al., 'Republic of the Marshall Islands *Changed Circumstances Petition* to Congress', CRS Report for Congress, 14 March 2005, at 33–37, available online at: http://www.bikiniatoll.com/CRSreportCCP.pdf (last visited on 6 December 2007).

[171] *Ibid.* Article II Section 1 (Health, Food, Agricultural Maintenance and Radiological Surveillance) specifies the distribution of Annual Proceeds:

> 'The Fund Manager shall disburse Annual Proceeds in accordance with Article III of this Agreement and as follows: (a) $30 million to the Government of the Marshall Islands, to be disbursed in annual amounts of $2 million for the 15-year period commencing one calendar quarter after the effective date of this Agreement. The Government of the Marshall Islands shall use these sums to obtain technical assistance, on a reimbursable basis, from the United States Public Health Service and other agencies of the Government of the United States. The Government of the United States shall provide such technical assistance including United States contractor services to assist the Government of the Marshall Islands to include, in its health-care system, health-care programs and services

However, the funds provided in connection with the establishment and functioning of the Tribunal were rather limited.[172]

According to Article III Section I much of the trust fund was allocated directly to Local Distribution Authorities (the LDAs) for the benefit of

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related to consequences of the Nuclear Testing Program and contemplated in United States Public Law 95-134 and United States Public Law 96-205. Such technical assistance shall be obtained in accordance with Section 226 of the Compact, the provisions of the Federal Programs and Services Agreement and such separate implementing agreements as may from time to time be concluded. Such technical assistance shall, at the request of the Government of the Marshall Islands, include a whole body counter and the training of its operator. The whole body counter shall be located in a suitable facility chosen and supplied by the Government of the Marshall Islands. The Technical assistance provided for in this subsection may include professional personnel services and dosimetry and bioassay services (b) Annual disbursements specified in this Section are in addition to the funds referred to in Section 211 (a) (3), 216 (a) (2) and 211 (b) of the Compact, which may also be expended by the Government of the Marshall Islands to provide its citizens with health-care programs and services elated *(sic)* to consequences of the Nuclear Testing Program. (c) The Government of the Marshall Islands may dedicate any part of the annual disbursements specified in this Section to the financing, including matching financing, of other related health-care and research programs and services of the Government of the United States which are otherwise available to the Government of the Marshall Islands. (d) At the request of the Government of the Marshall Islands, the Government of the United States shall provide technical assistance, programs and services, on a reimbursable basis, to continue the planting and agriculture maintenance program on Enewetak and to continue the food programs of the Bikini people and Enewetak people for as long as such technical assistance, programs and services may be required. Such technical assistance, programs and services shall be obtained in accordance with Section 226 of the Compact, the provisions of the Federal Programs and Services Agreement and such separate implementing agreements as may from time to time be concluded (e) $3 million to the Government of the Marshall Islands for the purpose of the conducting medical surveillance and radiological monitoring activities, to be disbursed in average annual amounts of $l million for the three-year period commencing on the effective date of this Agreement. The results of such medical surveillance and radiological monitoring activities shall be filed with the Claims Tribunal referred to in Article IV of this Agreement.'

Lum et al., *supra* note 170, at 33–7. There were different financial schemes for the people of Bikini; people of Enewetak; people of Rongelap and the people of Utrik.

[172] '(a) $500,000 to the Government of the Marshall Islands to provide for the establishment of the Claims Tribunal, to be disbursed prior to the first anniversary of the effective date of this Agreement. (b) $500,000 annually to the Claims Tribunal during the term of its existence for its operation, to be disbursed in quarterly amounts of $125,000 commencing one calendar quarter after the first anniversary of the effective date of this Agreement.

(c) $45.75 million to be made available to the Claims Tribunal as necessary for whole or partial payment of monetary awards made by the Claims Tribunal pursuant to Article IV of this Agreement, to be disbursed in annual amounts of up to $2.25 million for the 3-year period commencing on the effective date of this Agreement, and in annual amounts of up to $3.25 million for the 12-year period commencing on the third anniversary of the effective date of this Agreement;'

Lum et al., *supra* note 170, at 33–7.

the peoples of Bikini/Kili, Enewetak/Ujelang, Rongelap and Utrik. The local government council for Bikini/Kili, Enewetak/Ujelang, Rongelap and Utrik were to be the distribution authority for the people of Bikini, Enewetak, Rongelap and Utrik, respectively. Each distribution authority, as set out in this Agreement, was to receive and distribute, invest, or otherwise expend annual proceeds. Under the Section 177 Agreement was allocated US $75 million of the Trust Fund to Bikini.[173]

2. The Nuclear Claims Tribunal

The Tribunal has a two-fold jurisdiction: first, the jurisdiction based on Article IV Section 1, according to which the Claims Tribunal has jurisdiction to give a final determination on all claims past, present and future, of the Government, citizens and nationals of the Marshall Islands which are based on, arise out of, or are in any way related to the Nuclear Testing Programme,[174] and, secondly, over disputes arising from distributions of Trust Fund money by the LDAs under Articles II and III of the Section 177 Agreement. The first type of jurisdiction proved to be contentious. The Claims Tribunal has no jurisdiction over the United States, its agents, employees, contractors, citizens or nationals with respect to claims of the Government, citizens or nationals of the Marshall Islands arising out of the Nuclear Testing Programme. In the exercise of its jurisdiction, the Claims

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[173] Section 177 of the Agreement allocated the fund as follows: US $75 million of the Trust Fund to the Bikini LDA for the payment of claims arising out of the Nuclear Testing Programme for loss of or damage to property and people of Bikini (to be distributed in quarterly amounts of US $1.2 million over a 15-year period); US $48.75 million to be distributed in quarterly amounts of US $812,500 over a 15-year period; US $37.5 million to the Rongelap to be distributed in quarterly amounts of US $625,000 over a 15-year period; and US $22.5 million to be distributed in quarterly amounts over a 15-year period.

[174] See also Articles X and XII. Article X states:

'Espousal (Section 1 – Full Settlement of All Claims): This Agreement constitutes the full settlement of all claims, past, present and future, of the Government, citizens and nationals of the Marshall Islands which are based upon, arise out of, or are in any way related to the Nuclear Testing Programme, and which are against the United nations, its agents, employees, contractors and citizens and nationals, and of all claims equitable or any other relief in connection with such claims including any of those claims which may be pending or which may be filed in any court or other judicial or administrative forum, including the courts of the Marshall Islands and the courts of the United States and its political subdivisions;'

Article XII states:

'United States Courts: All claims described in Articles X and XI of this Agreement shall be terminated. No court in the United States shall have the jurisdiction to entertain such claims, and any such claims pending in the courts of the United States shall be dismissed.'

Tribunal is independent of the legislative and executive powers of the Government of the Marshall Islands.[175] The Tribunal in determining any legal issue may have reference to the laws of the Marshall Islands including traditional law, to international law and, in the absence of domestic or international law, to the laws of the United States (Article IV Section 3 – Governing Law). According to the domestic law of the Marshall Islands, the Tribunal has jurisdiction to hear this claim under section 105(a) of the Marshall Islands Nuclear Claims Tribunal Act 1987 (NCTA), as amended, which gives the Tribunal the duty and responsibility to decide claims by and disburse compensation to the Government and citizens and nationals of the Marshall Islands under section 123 for existing and prospective loss of or damage to person or property which is based on, arises out of or is in any way related to the Nuclear Testing Programme. The first year of the Tribunal's activities was marred by disagreements between the members of the Nitjela (the Parliament of the RMI) and the Tribunal as regards the manner of processing the claims.[176]

Personal injury claims were based on similar US statutory programmes providing compensation for American civilian and military personnel deemed to have been harmed by their own country's nuclear testing programme. Reference was made to Public Law 101–426 and the Radiation Exposure Compensation Act of 1990 (often referred to as the 'Downwinders' Act'). The US Congress found that fallout emitted from the atmospheric nuclear tests conducted at the Nevada Test Site exposed American civilians 'to radiation that is presumed to have generated an excess of cancers among those individuals'.[177] Following that finding, the Congress established a presumptive programme of compensation for specified diseases contracted by people who were physically present in the 'affected area' during the periods of atmospheric testing in Nevada. The Tribunal determined that it could do no less for the people of the Marshall Islands than the Downwinders' Act for American citizens. Accordingly, in August 1991,

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[175] It has quite broad powers: 1. issuing orders, making rules and promulgating procedural regulations; 2. providing funds for the operation of special tribunals appointed by the Tribunal to consider specific claims and disputes; 3. establishing and providing funds for the operation of Tribunal offices; 4. establishing and authorizing distribution from the Operating Fund; 5. establishing and authorizing payments out of the Claims Fund for monetary awards; 6. issuing orders requiring the Defender of the Fund to investigate the administration and distribution of Trust Fund monies by the LDAs; 7. issuing orders suspending any or all distributions by an IDA; and 8. establishing and funding LDAs as appropriate to carry out the intent of the Act: Section 6 (2) and 6 (4) of the Section 177 Agreement.

[176] Thornburgh et al., *supra* note 164, at 25.

[177] See http://www.nuclearclaimstribunal.com/hist.htm (last visited on 12 December 2007).

the Tribunal adopted its initial compensatable medical condition regulations providing awards for people:

> who had been physically present in the Marshall Islands during the testing period; and
> who had been medically diagnosed as having one of 25 separate medical conditions (later expanded).[178]

Due to the lack of all necessary information:

> the Tribunal's presumptive program meets the need for an efficient, simple, and cost-effective system of resolving personal injury claims where proof of causation would be impossible given the fact that exposure level information is not available.[179]

The generational aspect of the Tribunal is strengthened by the inclusion in 1994 by the Nitijela in the Tribunal's personal injury compensation programme of unborn children of mothers who resided in the Marshall Islands during the nuclear testing period (the so-called 'under' age Claimants).[180] Further, compensation was extended beyond the members of communities who were likely to be affected by radiation (Utrik, Bikini, Rongelap and Enewetak). Both the RMI and the NCT adopted a broader position that all 1,958 residents of the RMI would be eligible to file claims for injuries resulting from tests. This approach was contested by the US Government, who believed that the nuclear testing affected only these four communities, and therefore compensation should be limited to those four.

Under the Section 177 Agreement, the payment of the awards was made on the annual *pro rata* basis. This system was introduced in order to balance the interests of existing recipients 'to receive as much of their

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178 *Ibid.*

179 See http://www.nuclearclaimstribunal.com (last visited on 6 December 2007). Despite the requests that have been made by the RMI government to the United States, fallout measurements from the last two series of tests in the Marshall Islands (Operation Redwing in 1956 and Operation Hardtack I in 1958, comprising 50 tests averaging nearly one megaton each) still remain classified. It may be noted that the total yield of the 67 tests conducted by the US in the Marshall Islands is approximately 99 times greater than the total yield of the 87 atmospheric tests conducted in Nevada (approximately 108.5 megatons in the Marshall Islands compared to 1.1 megaton total in Nevada).

180 This was a contentious issue. The Nitijela's view was that such claimants might have suffered presumed medical conditions, including cancer transmitted by parents who were subject to radiation from the nuclear testing programme: Thornburgh et al., *supra* note 164, at 70–71.

awards as possible with the interests of future recipients to be treated fairly and equally'.[181] The same statement stated further that:

> This shortage of funds suggests that there should be no annual payment at all this year. However, the Tribunal feels it would be unreasonable to completely stop annual payments on such short notice to existing recipients.[182]

To this effect a small annual payment of 2 per cent of the net amount of each award was made and the initial payment level was reduced to 25 per cent for awards issued beginning in October each year.[183] It is evident that this system proved not to be fully successful. As of 31 December 2006, US $91,402,000 in compensation had been awarded under the Tribunal's presumptive personal injury compensation programme to or on behalf of 1,999 individuals (some of whom received multiple awards because they suffered from more than one compensatable medical condition). Of those 1,999 awardees, more than 1,000 died having received only part payment of the compensation awarded for their personal injuries. As of 31 December 2006, a total of US $73,261,198 had actually been paid to those awardees or their heirs, leaving an unpaid balance of US $18,140,802. The most dramatic Statement of Determination was issued by the Tribunal in October 2006, in which it observed that the annual payment of even 1 per cent would effectively exhaust the Fund, result in the closure of the Tribunal and the foreclosure of any payments for future claimants. The Statement also reported the prediction of the US National Cancer Institute which estimated that more that 500 cancers would result from exposure to radiation from the testing programmes in the population present during the testing period (more that half of these cancers would occur after 2003). The Tribunal made the following statements: '[t]here will by no *pro rata* annual payments for personal injury awards in 2006' and that:

> The inability of the Tribunal to fully pay off existing awards and the continuing flow of new claims and awards continues to evidence the manifest inadequacy of the existing funding provided under the Section 177 Agreement to fully compensate the people of Marshall Islands for injuries suffered as a result of the Nuclear Testing Programme.

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[181] Statement of Determination, 30 September 1996, available online at: http://www.nuclearclaimstribunal.com (last visited on 6 December 2007). The 1997 Statement of Determination confirmed the general policy on payments and further reduced the rates of payments.

[182] *Ibid.*

[183] *Ibid.*

And finally:

> It is clear that such final determination had not yet be made. But it is equally clear that the determination already reached by the Tribunal render the provision of the Section 177 Agreement 'manifestly inadequate'.[184]

The future work of the Tribunal will be carried out under the 'Changed Circumstances' provision of the Section 177 Agreements.

The Tribunal issued two landmark claims: first in 1999, the family of a Bikini boy who died of cancer at the age of 11 was awarded a full claim for his illness; and in the second, 2000, award to the people of Enewetak US $341 million for property brought on the basis of a class action.[185] Property loss and damage claims had different legal issues from personal injury claims, as the Tribunal observed that liability and causation were not issues pertaining to property damage claims, as it was not disputed that the US nuclear testing programme had caused the damage to the land. Therefore such clams were the subject of an adversarial approach. The issue to be decided was the determination and measure of damages.[186] What was ground-breaking was the first class action filed before the Tribunal on behalf of the Enewetak community in 1990. The award in favour of this community was made in 2000. The Tribunal issued the Memorandum of Decision and Order in the Enewetak class action.[187] The decision addressed the three categories of damage sought by the claimants: 1. the loss of use of their property; 2. the cost of restoring and repairing their property; and 3. the hardship suffered by the Enewetak people during their forced relocation. The damages for loss certainly reflect future generations as they not only accounted for the past loss (starting on 12 December 1947) and running until the effective date of valuation in 1996, but also for the future loss, beginning on the date of valuation and continuing until such future time as the affected property was returned to the people of Enewetak in a usable condition. This time was determined by the parties as 30 years from the effective date of the valuation or 17 May 2026.[188] The Tribunal awarded the Claimants US $149 million for past use and US $50,154,000 for future

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184 *Ibid.*

185 J.M. Walsh, 'Political Review – Micronesia', *Contemporary Pacific* (Spring/2001), at 215–16.

186 Thornburgh et al., *supra* note 164, at 39.

187 *In the Matter of the People of Enewetak, et al.*, NCT No. 23-902, Memorandum Decision and Order, 15 April 2000.

188 *Ibid.*, at 6.

lost use.[189] The peoples of Enewetak were also awarded US $34 million in damages for the hardship they suffered during their relocation to Ujelang. The Tribunal awarded an annual amount for each person from Enewetak who lived in Ujelang during each of 33 years between 1947 and 1980. [190]

By 2000, the RMI Government had concluded that the Trust Fund had become 'manifestly inadequate'[191] to provide compensation under the Section 177 Agreement, and filed a petition with the US Congress seeking additional compensation from the US based on Article IX of the Section 177 Agreement, on the basis of so-called 'changed circumstances'.[192] The

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[189] The Tribunal approached the costs of recovery in a broader sense as it reached the conclusion that the cost of restoration was disproportionate to the difference in value before and after the injury to the land and because cultural considerations made the difference in market value an inadequate measure of the Claimant's damages. *In the Matter of the People of Enewetak,* et al. supra note 185, at 13–14 and Thornburgh et al., *supra* note 164, at 44.

[190] *In the Matter of the People of Enewetak, et al., supra* note 187, at 31; similar property damages class action claims were filed on behalf of the residents of Rongelap and Utrik. The Bikini community was awarded total damages of 563 million and 315,000 dollars. This amount reflected damages for the loss of use; the cost of restoring Bikini to an acceptable condition and hardship damages. The Bikini population is still unable to return.

[191] That was the conclusion of the independent assessor, Richard Thornburgh, who in his Report concluded as follows:

> '[I]t is our judgement that the US$150 million trust fund initially established in 1986 is manifestly inadequate to fairly compensate the inhabitants of the Marshall Islands for the damages they suffered as a result of the dozens of the US nuclear tests that took place in their homeland;'

Thornburgh et al., *supra* note 164, at 72–3.

[192] The 'Changed Circumstances' provision reads as follows:

> 'If the loss or damage to property and person of the citizens of the Marshall Islands, resulting from the Nuclear Testing Programme, arises or is discovered after the effective date of this Agreement, and such injuries were not and could not reasonably have been identified as of the effective date of this Agreement, and if such provisions render the provisions of this Agreement manifestly inadequate, the Government of the Marshall Islands may request that the Government of the United States provide for such injuries by submitting such a request to the Congress of the United States for its consideration. It is understood that this Article does not commit the Congress of the United States to authorise and appropriate funds.'

The RMI referred to, *inter alia,* new and additional information since the promulgation of the Compact and stricter US radiation protection standards of 1997 and 1999 and the records of the Department of Energy, which were declassified and which evidence that the extent of the radioactive fall-out was greater than previously known. The Report prepared in 2004 by the US Department of State concluded that the request filed by the RMI did not qualify as 'changed circumstances' within the terms of the Compact. The Petition requested additional funds totalling US $3.3 billion, including amounts for personal injury awards; for unpaid NCT property damages; medical services infrastructure; and money paid annually for a health care programme for those exposed to radiation. See Lum et al., *supra* note 170, and United States Senate, Committee on Energy and Natural Resources, Full

petition's monetary requests included: unpaid Nuclear Claims Tribunal personal injury awards of US $14 million; unpaid Tribunal property damages awards to the peoples of the atolls of Enewetak and Bikini of US $949 million; US $50 million for medical care services infrastructure; and US $45 million annually for 50 years for a health care programme for those exposed to radiation.[193] On 11 April 2006, the Bikini Atoll people filed a class action before the US Federal Court, *inter alia,* for breach its fiduciary obligations to the Bikini people by declining and refusing to provide the Nuclear Claims Tribunal with funds sufficient to satisfy the award of US $563,315,000 for past and future loss of use of Bikini Atoll, restoration costs for a radiological clean up of the atoll, and hardship. In September 2006, the US Court put forth a motion to dismiss Bikini's claim. On 12 April 2006 the Enewetak Atoll of the Marshall Islands also filed a claim in the US Court of Federal Claims for compensation for damage under the 5th Amendment. The Enewetak case is still pending. [194]

3. Additional Funding under the 1986 Compact of Free Association

Money provided for the NCT was not the only financial assistance granted by the United States. On the basis of the Compact of Free Association, the US Government granted the amount of US $313 million to be paid annually over 15 years. Under Section 211(a) (1) of the Compact the US agreed to grant to the Marshall Islands US $26.1 million annually for the five-year period commencing on the effective date of the Compact; US $22.1 million annually for the next five-year period and US $19.1 annually for a third five-year period. However, the main purpose of these grants was to promote the economic self-sufficiency of the people of the RMI. Under the Section 177 Agreement, the portion of these funds was also aimed at a health-care programme and services relating to the consequences of the Nuclear Testing Programme, in addition to the US $150 million grant.

4. The 2003 Compact of Free Association Amendments to the 1986 Compact of Free Association

In 2003, the Compact of Free Association Amendments to the 1986 Compact of Free Association (hereinafter the 'Amended Compact') were

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Committee Hearing Asian Affairs, available online at: http://energy.senate.gov/public/index.cfm?FuseAction=Hearings.Testimony&Hearing_ID=1478&Witness_ID=4216 (last visited on 10 July 2008).

193 Lum et al., *supra* note 170, at 2.

194 *The People of Bikini, by and through the Kili/BikiniEjit, Local Government Council Plaintiffs, v. United States of America, Defendant,* available online at: http://www.bikini-atoll.com/2006%20Bikini%20vs.%20US%20CFC.pdf (last visited on 10 July 2008); the US Government rejected the claim mainly on the basis of jurisdiction.

passed by the Congress.[195] This Amended Compact is in force between 2004 and 2023. In general terms the Amended Compact primarily covers the following areas: education; health; and infrastructure. One of the most important amendments to the Compact was the revised financing scheme relating to the 1986 Compact – Title II which concerns financial assistance in the promotion of the economic self-sufficiency of the people on the RMI. In general terms, under the Amended Compact assistance is provided in the form of annually decreasing grants, combined with increasing contributions to trust funds intended as a source of revenue for the RMI after 2023, when the grants by the US will have been terminated. Grant funding will decrease annually and will result in falling *per capita* grant assistance.[196] The Amended Compact has several very stringent provisions relating to the structural framework of the grants, such as detailed implementation plans and the setting up of managers and trust committees. The US Trust Fund receives an initial US contribution of US $8 million in the fiscal year 2004 and the annual contributions will increase between 2005 and 2023. Trust funding is conditional on contributions of at least US $25 million being made by the RMI prior to the fiscal year 2004 of 'bump up' funds available to them under Section 231 of the Amended Compact during the fiscal years 2002 and 2003. Additionally, after 2004 contributions by the RMI and third parties to the fund are expected. Under the Amended Compact, the Title II base grant would decline by US $5 million per year between the fiscal years 2005 and 2023. This amount will be deposited in the Trust Fund.[197] In relation to the Marshall Islands Nuclear Testing Programme, Section 103 of the Amended Compact reiterates the provisions adopted in the 1986 Compact as regards the nuclear tests effects.

5. The Latest Developments

On 10 July 2007,[198] the bill that would provide supplemental *ex gratia* compensation to the RMI for impacts of the Nuclear Testing Programme

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[195] Public Law, 17 December 2003, 108–188, Text of the Compact of Free Association Amendments and the Appendix V-Trust Fund Agreement; available online at: http://www.rmiembassyus.org/Compact/Compact%20Sub%20Agreement.pdf (last visited on 6 December 2007); see also United States Government Accountability Office. Testimony before the Subcommittee on Insular Affairs, Committee on Natural Resources, House of Representatives. Compact of Free Association. Statement of David B. Gootnick, Director International Affairs and Trade, available online at: http://www.gao.gov/new.items/d071115t.pdf (last visited on 6 December 2007).

[196] RMI *per capita* grant assistance will fall from over US $1,000 in 1987 to just over 300 in 2023. See Statement of David B. Gootnick, *supra* note 195, at 6.

[197] Section 216 of the Amended Compact.

[198] See http://www.yokwe.net/index.php?name=News&file=article&sid=1846 (last visited on 6 December 2007).

was introduced. In general the proposed bill related to the following areas: the monitoring of the Runit Island (part of the Enewetak Atoll) by the Secretary for Energy as a part of the monitoring programme, the periodic surveying of radiological conditions on the island and reporting to the Congress,[199] the extension of the working of the Energy Employees Occupational Illness Compensation Programme ('EEOICPA') to the citizens of the RMI (which had been interpreted as covering only US citizens); a special fund would be provided to support a primary health-care clinic in each of the affected communities,[200] a regular impact assessment should be conducted regarding the nuclear impact on the areas beyond the four most affected Atolls.

6. Other Relevant (Non Nuclear Testing) Trusts: The Marshall Islands Intergenerational Trust Fund (MIITF)

In 1999 the Republic of the Marshall Islands established the Marshall Islands Intergenerational Trust Fund with a view to achieving broader financial autonomy in the management of its recurrent budget, provision of an adequate level of social infrastructure and services an the enhancing of the capacity of Government effectively to provide capital development assistance. The RMI set aside the amount of US $17.5 million for the MIITF.[201] It may be said that:

> The MIITF is the only revenue stabilization instrument capable of generating the funds required to achieve budgetary self-reliance. As such the successful development of the Fund is crucial to the sustainability of the RMI economy. This Fund is a key component of the RMI strategy to achieve budgetary self-reliance and provide for future generations of Marshallese.[202]

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[199] Between 1977 and 1980, the US conducted a clean-up of some of the contaminated areas of the Enewetak Atoll. Some of the contaminated soil and debris was placed on Runit Island (in the Cactus crater, formed by one of the tests), mixed with concrete. Under the 1986 Compact, the RMI accepted full responsibility for and control over the utilization of areas of the Marshall Islands affected by the Nuclear Programme Testing. However, additionally, the Compact reaffirmed the previously granted authorization for the US Department of Energy ('DOE') for medical care and environmental monitoring relating to the testing programme.

[200] Under the Section 177 Agreement, funds of US $2 million were allocated annually to provide health care for the most affected communities. However for various reasons the funds were depleted in 2003. Thereafter, they were supplemented by the Congress on a discretionary basis.

[201] Law promulgated in the Marshall Islands on 7 April 1999 (P.L. 1999-901); Office of the President of the RIM informed that it has at present US $75 million: see http://www.rmigovernment.org/news_detail.jsp?docid=94 (last visited on 6 December 2007).

[202] RMI Compact Proposal, at 5, para. 25; available online at: http://marshall.csu.edu.au/Marshalls/html/Compact2002/2002compactpro.pdf (last visited on 6 December 2007).

In 2001 under the Fiscal and Financial Management Programme (FFMP) of the Asian Development Bank[203] the loan was granted for MIITF which emphasizes its intergenerational character. On the Objectives and Scope of the loan it is stated that:

> The key objectives of the program loan are: (i) stabilize the fiscal position; (ii) strengthen public sector financial and economic management, (iii) ensure a sustainable income flow for future generations, (iv) improve the effectiveness of the public service, and (v) enhance the policy environment for the private sector.[204]

The 2003 Amended Compact made the following provisions as regards the MIITF:

> The RMI's aim is to have sufficient funds invested in the MIITF by the end of 2018 . . . The investment in the MIITF will come from: 1) RMI revenues; 2) the United States; 3) other countries; 4) regional and international development and finance institutions; and 5) the reinvestment of earnings. The RMI has already set aside $17.5 million for its initial contribution. A further $14 million will be set-aside in the 2003 budget. The Republic of China and development/finance institutions, such as the Asian Development Bank, will also provide funds for the MIITF. The Asian Development Bank will assist in providing technical assistance to make the MIITF operational.[205]

It is also provided that other donors are envisaged. The funding of the MIITF will be structured as follows: the US contributes US $18 million annually to the MIITF for the period 2004–2018; the RMI makes annual contributions from budget revenues, and the RMI will seek contributions from other parties.[206] 'The MIITF will become operational when contributions are received from other donors, the RMI Government's start-up contribution will then be deposited into the MIITF.'[207] This trust provides as well a 'generational' aspect in the legal regulation of the Marshall Islands.

IX. CONCLUSIONS

This chapter examined the issues of intergenerational equity in the light of the recent constitutional developments as well as the ongoing process

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[203] Fiscal and Financial Management Program, Loan- RMI-34504-01; available online at: http://www.adb.org/Documents/Profiles/LOAN/34504013.ASP (last visited on 12 December 2007).

[204] *Ibid.*

[205] RMI Compact Proposal, *supra* note 202, at 5, para. 25.

[206] *Ibid.*, at 5, para. 28.

[207] *Ibid.*, at 10, Attachment A.

of the settlement of nuclear claims arising out of the US nuclear testing in the Marshall Islands and other trusts and settlements in the same State, taking into account the rights of unborn generations. As presented above, the issue of the existence of the rights of future generations is not at all clear and remains an unsettled question in both philosophy and law. Many recent Constitutions (such as that of Poland), invoke future generations in their part on general foundational principles of the State. However, such mention of future generations has very little effect on the asserting of the rights of future generations in the legislative process and practice. Far more reaching is the solution adopted in Israel, where the Commission on Future Generations forms part of the Knesset and has the power to review all proposed law from the point of view of future generations. It must be noted, however, that the role and functioning of this body are not without doubts. In the light of the above, the legal processes taking place in the Republic of Marshall Islands are of paramount importance, most notably the legal proceedings before the Nuclear Claims Tribunal, which in its legal settlements accounts for generations unborn and their well-being, even if the allocated funds are insufficient. Even the so-called Intergenerational Trust Fund is aimed, *inter alia*, at future generations. Therefore, it may be said that the theory of intergenerational equity is alive, if it remains controversial. There are even views that this concept is indispensable for contemporary global environmental governance.[208]

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[208] L. Collins argues as follows:

> '. . . the doctrine of intergenerational equity integrates the paradigm of rights and responsibilities, transcends the limitations of each paradigm taken separately, and has the potential to function as a universally acceptable framework for global environmental governance.'

Collins, *supra* note 2, at 93. The same author submits elsewhere that in the European Union the adoption of the concept of intergenerational equity is unclear and the rights of future generations can be inferred from the concept of sustainable development, which, however, suffers from unclear content: L.M. Collins, 'Environmental Rights for the Future? International Equity in the EU', 16 *RECIEL* (2002) 321, at 322–30.

4. The European Convention on Human Rights and the human right to a clean environment*

I. INTRODUCTION

This chapter will focus on the human right to a clean environment and the 1950 European Convention on Human Rights (ECHR) as interpreted by the European Court of Human Rights (ECtHR), seen from the perspective of the jurisprudence of the English courts. The chapter will consist of the following main sections: an introduction to the human right to a clean environment; the ECHR and the jurisprudence of the ECHR; a brief introduction to the 1998 Human Rights Act (HRA); and the relevant jurisprudence of English courts.

II. INTRODUCTION TO THE ISSUES CONCERNING THE HUMAN RIGHT TO A CLEAN ENVIRONMENT

The issue of the human right to a clean environment has, for many years, been a subject of vigorous discussion.[1] The focus of the discussion has been

* This is a shortened and updated version of an Article: 'The Human Right to a Clean Environment – Phantom or Reality? The European Court of Human Rights and English Courts Perspective on Balancing Rights in Environmental Cases', with Jim Marshall, 76 *Nordic Journal of International Law*, at 103–151.

[1] To mention a few of the numerous publications on this subject: see R. Desgagné, 'Integrating Environmental Values into the European Convention on Human Rights', 89 *AJIL* (1995) 263, at 263–94; M. Thorme, 'Establishing Environment as Human Right', 19 *Den. J. Int'IL. & Pol'y* (1991) 301, at 301–41; A. Boyle and M. Anderson (eds), *Human Rights Approaches to Environmental Protection* (1996); D. Shelton, 'What Happened in Rio to Human Rights?', 3 *YBIEL* (1992) 75, at 75–93 (hereinafter Shelton I); D. Shelton, 'Human Rights, Environmental Rights and the Right to the Environment', 28 *Stanford J. Int'l L.* (1991) 103, at 103–38; A. Kiss and D. Shelton, *International Environmental Law* (2004), at 661–731; G. Handl, 'Human Rights and Protection of the Environment: A Mildly "Revisionist" View', in A.A. Cançado Trinidade (ed.), *Human Rights, Sustainable Development and the Environment* (1992) 117 (hereinafter Handl I); G. Handl, 'Human Rights and Protection of

shifting, however, from the very issue of the existence of such a right to the more practical problems of the distinction between substantive and procedural human rights to a clean environment (i.e. right to environmental information, participation in environmental decision-making and access to environmental justice). The early, general debate relating to the existence of such a right was mainly characterized by its vagueness and lack of focus. For example, much of the discussion was devoted to the name of such a (possible) right, such as a 'right to an environment' or a right to a 'decent', 'healthy', or 'safe' environment.[2] The issues which were initially widely analysed concerned the possible link between human rights in general and the environment and the classification of such a right. However, no persuasive theories were offered. Certain writers rejected the existence of such a possibility. G. Handl, for example, expressed doubts whether the human right to a clean environment might be derived at all from a general discourse on human rights.[3]

According to the views of the aforementioned writers, such a right belonged to the category of so-called solidarity rights (or the third generation of human rights). This category of human rights is in itself rather controversial.[4] K. Vasak is assumed to have originated the concept of this category of human rights. He defined them in the following manner:

> They are new to infuse the aspirations they express, are new from the point of view of human rights in that they seek to infuse the dimension into areas where it has all too often been missing, having been left to the State, or States . . . They are new in that they both are involved against the State and demanded of it; but above all (and herein lies their essential characteristic) they can be realised only through the concerned efforts of all actors of the social scene: the individual, the State, public and private bodies and the international community.[5]

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the Environment', in A. Eide et al. (eds), *Economic, Social and Cultural Rights: A Textbook* (2001) 303, at 303–28 (hereinafter Handl II); M. Fitzmaurice, 'Some Reflections on Public Participation in Environmental Matters as a Human Right in International Law', 2 *Non-State Actors and International Law* (2002) 1, at 1–22; J. Hancock, *Environmental Human Rights: Power, Ethics and Law* (2003); T. Hayward, *Constitutional Environmental Rights* (2005).

[2] Desgagné, *supra* note 2, at 263–4.

[3] Handl II, *supra* note 2, at 306. He referred in particular to an unresolved issue of the concept of human rights as either inherent to human beings by the very virtue of their humanity, or granted by a State. This debate, in his view, not just affects the understanding of the burden of proof, but also goes to the very core of the debate between the proponents of natural law and positive law. See R.S. Pathak, 'The Human Rights System as a Conceptual Framework for Environmental Law', in E. Brown Weiss (ed.), *Environmental Change and International Law: New Challenges and Dimensions* (1992), at 199–204.

[4] It was thought that this category included the right to development, and co-ownership of the common heritage of mankind.

[5] K. Vasak, 'For the Third Generation of Human Rights: the Right of Solidarity', *Inaugural Lecture for the 10th Study Session of the International Institute of Human Rights*

However, this category of rights was in general subject to a certain degree of criticism from the point of view of the usefulness of these rights in relation to the environmental human right.[6] Due to the inherent character of these rights, their application in relation to the environmental human right would make the main beneficiaries developing States. This, however, would not conform with the classical approach to human rights.[7]

The view, which was frequently expressed, draws on the environmental human right from the catalogue of already existing human rights, i.e. rights enshrined in the two United Nations Covenants: of Civil and Political Rights and of Social, Economic and Cultural Rights. The most frequently referred to is the right to life (which belongs to the first generation of human rights) or the right to a standard of living adequate for health and well-being (which belongs to the so-called second generation of human rights). It is assumed that the vague and ill-defined content of the proposed right to a clean environment would acquire certain normativity if it were drawn from already established human rights.[8] Such an approach is not without problems, in particular with respect to the second generation of human rights, as, '[d]espite their advantages, the existing system for implementing and monitoring second generation rights construes these rights rather narrowly, and continues to approach environmental questions only indirectly'.[9]

Finally, there are some views which define such a right as a mixture of civil and political and social, economic and cultural rights. The proponents of this view, however, point out that the second generation of human rights are vague in nature, and, therefore, the implementation in practice of an environmental right, in part derived from this category of rights, would encounter inherent difficulties.[10] Moreover, such a right would represent a very wide spectrum of economic, political and social issues, thus making the implementation of and compliance with such a right very problematic.[11] The same author observes that the changing structure of

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(July 1979); see also P. Alston, 'A Third Generation of Solidarity Rights: Progressive Development of Obfuscation of International Human Rights?', 29 *NILR* (1982) 307, at 309; S. Marks, 'Emerging Human Rights; A Generation for the 1980s?', 33 *Rutgers L. Rev.* (1980–81) 435, at 441; P. Kooijmans, 'Human Rights – Universal Panacea? Some Reflections on So-called Human Rights of the Third Generation', 37 *NILR* (1982) 315, at 317.

[6] They were thought to be so general as to encompass everything and everybody: see A. Boyle, 'The Role of Human Rights in the Protection of the Environment', in A. Boyle and M. Anderson (eds), *Human Rights Approaches to Environmental Protection* (1996) 43, at 46.

[7] *Ibid.*, at 49.

[8] J.G. Merrills, 'Environmental Protection and Human Rights: Conceptual Aspects', in Boyle/Anderson (eds), *supra* note 6, 25, at 25.

[9] M. Anderson, 'Human Rights Approaches to Environmental Protection: An Overview', in *ibid.*, 1, at 6.

[10] Handl II, *supra* note 2, at 133.

[11] Handl I, *supra* note 2, at 120–121.

environmental measures, which are subject to socio-legal re-ordering (such as saving jobs), adds to definitional and practical difficulties of the problem of the human right to a clean environment.

In the intervening years between the ICCPR, ICESCR and now, the discourse relating to environmental human rights has shifted from definitional issues to the more practical approach, based on a division of this right into a substantive and a procedural environmental human right. The latter type of this right has particularly gained in importance since the elaboration and the entry into force of the 1998 Aarhus Convention on Access to Information, Public Participation and Access to Justice in Environmental Matters.[12] This Convention is an emanation of certain principles contained in the 1972 Stockholm Declaration on Human Environment and the 1992 Rio Declaration on Development and Environment, such as Principle 10 of the Rio Declaration, which grants a procedural right to a clean environment. It is generally thought that the procedural environmental right is a more effective and flexible tool in achieving environmental justice than a substantive right, which frequently does not grant any procedural rights to information, participation or judicial justice, and thus is to a large extent only a policy statement.[13] This is often the case concerning the constitutional right to a clean environment. On the international plane, T. Hayward observes in relation to the Aarhus Convention:

> rights of information are clearly a prerequisite to effective democratic citizenship; and democracy is enhanced by increasing government and industry transparency and accountability on environmental issues.[14]

This Convention is devoted in its entirety to the procedural environmental human right: an individual must be granted the right to receive information, be entitled to participate in the decision-making process concerning environmental matters and have access to environmental justice. Failure to comply with these obligations implies a breach of a treaty by a State. The main pillar on which the Aarhus Convention is broadly conceived is public participation. Public participation under this Convention covers four types of decision-making procedures: specific activities; plans; programmes and policies; and executive regulations and

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[12] This Convention entered into force in 2001.

[13] See for an in-depth discussion on this subject-matter: T. Hayward, *Constitutional Environmental Rights* (2005), at 84–92.

[14] *Ibid.*, at 143.

generally applicable rules.[15] It is based on two fundamental principles: the 'early' public participation and the 'effective' public participation (Article 6(4) of the Aarhus Convention). Article 9(1) of the Convention defines the grounds on which access to environmental justice is based.[16] At present, however, implementation of the Convention is most advanced in relation to access to information. Public participation is still in its initial stages and access to environmental justice is the least developed area of the implementation of the Convention. It is not often remembered that there are international environmental conventions which grant a right to information and public participation, although they are not human rights-based. The 1991 Espoo Convention on Environmental Impact in a Transboundary Context is an example of such a convention.[17] The basic principle of the Espoo Convention is the same as the one enshrined in the Aarhus Convention, i.e. the establishment of a reasonable time-frame allowing sufficient time for each of the different stages of public participation in the environmental impact assessment (EIA). The extent of public participation is even broader in the new Protocol to the Espoo Convention (the 2003 Kiev Protocol on the Strategic Impact Assessment[18]), which encompasses public consultations at the stage of plans and programmes (Article 2(6)), in contrast to the Espoo Convention, which envisages it at the stage of projects.

At the international level there are two instruments which grant a direct right to a clean environment: the 1981 African Charter on Human

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[15] J. Ebbeson, Background paper No. 5, 'Information, Participation and Access to Justice: the Model of the Aarhus Convention', Joint UNEP–OHCHR Expert Seminar on Human Rights and the Environment (14–16 January 2002), available online at: www.ohchr.org/english/issues/environment/environ/bp5.htm (last visited on 28 June 2008).

[16] The denial of environmental information gives the right to a review procedure before the court or another independent or impartial body (Article 9(1)); any member of the public having a sufficient interest or maintaining impairment of a right has recourse to a review procedure before the court or another independent or impartial body in order to challenge the substantive or procedural legality of any decision, act or omission concerning the specific activities which may affect the environment (Article 9(2)); and, finally, members of public, if they meet required criteria laid down in national law, shall have access to administrative or judicial procedures to challenge acts and omissions by private persons and public authorities which contravene the provisions of each State's national environmental law (Article 9(3)).

[17] The Convention provides for:

> '. . . an opportunity to the public in areas likely to be affected to participate in relevant impact assessment procedures regarding proposed activities and shall insure that the opportunity provided to the public of the affected area is equivalent to that provided to the public of the State of origin' (Article 2(6)).

[18] Not yet in force.

Rights and Peoples Rights (Article 24), which recognized a collective right to a clean environment[19] and the 1988 San Salvador protocol on Economic, Social and Cultural Rights to the 1969 American Convention on Human Rights (Article 11), which is the first and only instrument according an individual right to a clean environment.[20] In 2002, for the first time, Article 24 of the African Charter was a basis for the petition filed by two non-governmental organizations before the Commission on behalf of the Ogoni people and against the Nigerian Government and the Shell oil company. The claim was also filed on the grounds of other human rights, such as the right to life and the right to health. The environmental human right was interpreted by the Commission broadly as not only providing a clean environment and unimpaired access to resources, but also conducting environmental impact assessment studies prior to any activity which may impact adversely on the environment. It also emphasized the right to information and the right to be heard (such a right is also part and parcel of the evidence for the environment impact assessment). It may then be stated that the EIA undoubtedly constitutes a procedural human right to a clean environment. This is often overlooked. The above-mentioned case is, however, exceptional, as it was brought, *inter alia*, on the basis of the right to a clean environment as enshrined in the African Charter. However, as international practice indicates, the insignificant number of international agreements granting direct environmental right results in the selection of other human rights, such as the right to life, the right to health, the right to an adequate standard of living and minority rights, as the basis for alleged violations linked to environmental degradation.[21]

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[19] Article 24: 'All peoples shall have the right to a general satisfactory environment favourable to their development'; see M. Soveroski, 'Environment Rights versus Environmental Wrongs: Forum over Substance?', 16 *RECIEL* (2007) 261, at 264.

[20] Article 11 says:

> '1. Everyone shall have the right to live in a healthy environment and to have an access to basic public services. 2. The state parties shall promote the protection, preservation and improvement of the environment.'

See Soveroski, *supra* note 19, at 264.

[21] For example, the right to life: *EHP v. Canada*, *HRC*, Communication No. 67/1980 (27 October 1982); *Yanomani Indians v. Brasil*, Inter-American Commission on Human Rights, Decision 7615 (1985); right to health: was featured in the practice of the Economic and Social Council (ECOSOC) in reports of the Parties and in general Comment No. 14 in which it said:

> 'the right to health embraces a wide range of socio-economic factors that promote conditions in which people can lead a healthy life, and extends to underlying determinates of health such as a healthy environment.'

There are also international agreements which grant what may be called an indirect right to a clean environment. An example of such an agreement is the 1989 International Labour Organization Convention (No. 169) concerning Indigenous and Tribal Peoples in Independent Countries. This Convention requires its Parties to adopt special measures to safeguard the environment for indigenous peoples.

The landmark declarations in the development of international environmental law, the 1972 Stockholm Declaration on Human Environment and the 1992 Rio Declaration on Development and Environment, contain language that, although relating to human rights, is couched in general terms and is too vague in relation to the environment itself to be viewed as granting a direct human right to a clean environment. Principle 1 of the 1972 Stockholm Declaration introduces language which links environment to the 1948 Universal Declaration of Human Rights. It pledges that a person 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. It also states that a person has the duty to protect and improve the environment for present and future generations; '[i]n this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated'. It may be said that the element which connects the human environment and the Universal Declaration of Human Rights is human dignity.

The 1992 Rio Declaration is, in its entirety, the expression of the concept of sustainable development but does not grant a direct right to a clean environment. It states: '[h]uman beings are in the centre for sustainable development. They are entitled to a healthy life in harmony with nature.' This statement is couched in the language of 'entitlement' rather than a right. It may be observed (as in the Stockholm Declaration) that this principle is formulated in very general terms, and it is doubtful whether it may constitute the basis of the future formation of a human right to a clean environment. There are, however, different views arguing that one possible way of avoiding the dilemma of the definitional nature (as well as the problem of categorization of human rights) is to leave the discourse of human rights and rely entirely on

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and '[a]ny person or group victim of a violation of the right to health should have an access to effective judicial or other appropriate remedies at both national and international levels'; right to adequate standard of living: the ECOSOC referred to environmental issues in its General Comment on the Right to Adequate Food and its Comment on the Right to Adequate Housing ('housing should not be built on polluted sites nor in proximity to pollution sources that threaten the right to health of the inhabitants').

the concept of sustainable development, 'where it advances or realises the right to a healthy environment'.[22] The same author asserts that the 1992 Rio Declaration is the expression of the evolution of the right to a clean environment, which is translated into the principle of sustainable development, including the rights of future generations; in the view of the present author, this interesting approach is not without flaws. The concept of sustainable development in itself is very vague and its normative content is ill-defined.[23] Equally elusive is the concept of intergenerational equity. It appears that drawing an uncertain human right from the concept of sustainable development, which in itself is vague and without firm normative content, neither leads to definitive results nor clarifies the issue. Furthermore, the character of the Rio Declaration (and also the Stockholm Declaration) is that of a soft-law instrument and both of these Declarations contain very few principles which have binding force on the basis of international customary law.[24]

In general, however, it may be said that there is still a great degree of uncertainty concerning the existence of a global, uniform and universally accepted substantive human right to a clean environment. It appears that a so-called procedural right gained certain recognition as a less controversial right, and that both the environmental impact assessment procedure and the Aarhus Convention contributed to the acceptance and development of this right on the international and national levels.[25]

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[22] S. Giorgetta, 'The Right to a Healthy Environment, Human Rights and Sustainable Development', 2 *International Environmental Agreements: Politics, Law and Economics* (2002) 171, at 182.

[23] See, e.g., V. Lowe, 'Sustainable Development and Unsustainable Argument', in A. Boyle and D. Freestone (eds), *International Law and Sustainable Development: Past Achievements and Future Challenges* (1999) 19, at 19–38.

[24] The principle on the prohibition of transboundary environmental harm to other States and in the areas outside the States' jurisdiction (Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration) is one such acknowledged norm. It was confirmed by the International Court of Justice in the *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion of 8 July 1996 [1996] ICJ Rep. 226, at 241–2, para. 29.

[25] It has been argued that at the national level environmental rights have been largely vacuous in content and were only paying lip service to environmental concerns, in fact promoting economic development, thereby depriving environmental rights of any efficiency: Hancock, *supra* note 2, at 103. See also Soveroski, *supra* note 19, at 271, who argues that '[t]here seems to be less strenuous objections to recognising the rights of access to information and justice, and to participate in environment-related decision making'. The same author states that a substantive right to a clean environment is emerging and, if not yet customary international law, is perhaps an emerging general principle of international law, recognized by civilized nations. This view is based, *inter alia*, on numerous domestic acts and constitutions, which contain such an act: Soveroski, *supra* note 19, at 267–8.

III. THE 1950 EUROPEAN CONVENTION ON HUMAN RIGHTS AND THE JURISPRUDENCE OF THE EUROPEAN GRAND CHAMBER OF HUMAN RIGHTS

A. General Introduction

The European Convention on Human Rights forms part of the European regional nexus of human rights instruments.[26] The jurisprudence of the Court concerning the interpretation of the catalogue of human rights included in the Convention to give effect to environmental concerns has been the subject of ongoing debate and much controversy. In general, the interpretation of the Convention by the Court is one of the most disputed issues in the practice of the Court, which resulted in stimulating and extensive jurisprudential debate. The general problems underlying the interpretive principles of the Convention, such as the margin of appreciation (as well as the implication of this concept for universality versus relativism[27]), autonomous concepts [28] and the tests of the balancing of interests between an individual and the community as a whole and of proportionality still remain largely unresolved. These general principles also have a bearing on the interpretation by the Court of the so-called 'environmental human right'.

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[26] The European Court of Human Rights is one of the European institutions. The 1950 European Convention on Human Rights was adopted by the Council of Europe, which was established in 1949 by the Treaty of London, signed by nine States: Belgium, France, Ireland, Italy, Luxemburg, The Netherlands, Norway, Sweden and the United Kingdom. At present there are 46 States Parties to the Convention. The Court is composed of a 'number equal to that of High Contracting Parties' to the ECHR (Article 20). The judges are elected by the Parliamentary Assembly for a renewable period of six years. Protocol 11 to the Convention made the jurisdiction of the Court compulsory and abolished the Commission. The catalogue of civil and political rights has been vastly enhanced by the adoption of Protocol 13 to the Convention; all this information is available online at: www.echr.coe.int/ECHR/HN/Header/The+Court/The+Court/History+of+the+Court (last visited on 20 June 2008).

[27] There is a vast amount of literature on this subject, such as R.St.J. MacDonald, 'The Margin of Appreciation', in R.St.J. MacDonald et al. (eds), *The European System for the Protection of Human Rights* (1993) 83, at 83–124; H. Yourow, *The Margin of Appreciation Doctrine in the Dynamics of the European Court of Human Rights Jurisprudence* (1996); D. Shelton, 'The Boundaries of Human Rights Jurisdiction in Europe', 13 *Duke J. Comp. & Int'l L.* (2003) 95, at 95–153; J. Sweeny, 'Margins of Appreciation: Cultural Relativity and the European Court of Human Rights and the Post-Cold War Era', 54 *ICLQ* (2005) 459, at 459–74; E. Benvenisti, 'Margin of Appreciation, Consensus, and Universal Standards', 31 *N.Y.U.J. Int'l Law & Pol.* (1999) 843, at 843–54; P. Mahoney, 'Judicial Activism and Judicial Self-Restraint in the Court: Two Sides of the Same Coin', 11 *HRLJ* (1990) 57, at 57–88; P. Mahoney, 'Speculating on the Future of the Reformed European Court of Human Rights', 20 *HRLJ* (1999) 1, at 1–4.

[28] See in depth G. Letsas, 'The Truth of Autonomous Concepts: How to Interpret the ECHR', 15 *EJIL* (2004) 279, at 279–305; *idem*, *A Theory of Interpretation of the European Convention on Human Rights* (Oxford: Oxford University Press, 2007).

Of paramount importance for the environment and human rights is undoubtedly the doctrine of margin of appreciation and the balancing of interests test (the interests of an individual versus the interests of the community). Since its introduction, the margin of appreciation has become one of the most taxing problems concerning the jurisprudence of the ECtHR. This doctrine is derived purely from the practice of the Court, and is not provided for in the Convention itself. It was initially introduced by the Court in the 1961 *Lawless v. Ireland* case[29] and further developed in 1976 in *Handyside v. United Kingdom*.[30] Although several writers attempted to define the character of the doctrine of the margin of appreciation, it remained elusive. S. McInterney describes this doctrine in the following manner:

> One of the most complex features of international human rights law is the challenge of balancing of international human rights norms and the particularity of the contexts in which their application arises. Aligned to this is the delicate task of mediating the tensions between effective international supervision and the upholding of established human rights norms on one hand, and primary domestic responsibilities and socio-cultural choices on the other. The poles in the context may be seen as involving the vertical or horizontal distribution of power, as well as (Absolute or relative) nature of the rights at issue. The balancing involved in any discernible standards as well as recognition of the subjectivity of the context and fact. Beyond this, the balancing needed in relation to all human rights would appear to be heightened in the context of international human rights supervision, even in a relatively cohesive system such as the European Convention on Human Rights. These competing considerations form a symbiosis which a supervisory body such as the European Court of Human Rights must continually define in its interpretative and supervisory role. The margin of appreciation may be the single most distinguished interpretative feature of the ECHR jurisprudence: it has defined not only interpretative methodology of Strasbourg jurisprudence but also the substantive import of Convention rights. It remains pivotal to the operation of a critical symbiosis between national upholding of the Convention and the supervision of the ECHR mechanism: it lies at the heart of the ineluctable and perennial mediation of consensus and relativity, supremacy and national autonomy as well as uniformity and diversity.[31]

The ECtHR defined its role, in relation to the safeguarding of human rights by the national systems, as subsidiary. According to the Court, national authorities are better equipped to assess local conditions and give effect to 'pressing social needs', which are implied by the notion of 'necessity' in this context.[32] The Court was always adamant in observing that the foremost

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[29] *Lawless v. Ireland* (No. 3), 1 EHRR 15 (1961).

[30] *Handyside v. United Kingdom*, 1 EHRR 737 (1976).

[31] S. McInerney, review of the book by H.C. Yourow, 'The Margin of Appreciation Doctrine in the Dynamics of the European Court of Human Rights', in 9 *EJIL* (1998) 763, at 763.

[32] Shelton, *supra* note 27, at 130.

responsibility for safeguarding human rights rests with national authorities and courts. They are also best qualified to assess the notions of 'necessity' (within the context of social needs), and 'restrictions' and 'penalty', due to their deep knowledge of the conditions prevalent in their countries.[33] The Court also made it quite clear that the application of the margin of appreciation has its limitations. The ECtHR exercises a supervisory function which 'concerns both the aim and measure challenged' and its 'necessity'.[34]

The doctrine of the margin of appreciation was applied by the Court in many cases, including in the application of Article 8 (the right to respect for family and private life), Article 10 (freedom of expression) and Protocol I (the right to property), which played a very important role in relation to the so-called environmental human right. Briefly speaking, the margin of appreciation and the issue of universality are two sides of the same coin. The Court explained in the *Handyside* case that certain concepts (in this case morals) could not be confined to one uniform definition that would fit all circumstances, and that:

> The view taken by their respective laws of the requirement of morals varies from time to time and from place to place, which is characterised by a rapid and far-reaching evolution of opinions on the subject.[35]

The Court's permissive attitude to cultural relativity caused a long-lasting debate which engaged practitioners and theorists alike without achieving definite results. The main criticism has been based on the premise that such a relaxed approach mocks and undermines universal human rights standards and instead encourages States to depart from them and to rely on local traditions.[36] The practical implementation of this doctrine is also subject to certain doubts, in particular as to the role this theory fulfils in the judicial function of the ECtHR. D. Shelton observes that the lack of common standards is a drawback, as well as the insufficient specification of its comparative methods, standards of evidence and the extent of its enquiry. The Court's application of the margin of appreciation is characterized by the lack of transparency and depth and the rigorous standard in the comparative approach to this doctrine.[37]

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[33] *Handyside*, *supra* note 30, at para. 48.
[34] *Ibid.*, at para. 49.
[35] *Ibid.*, at para. 48.
[36] See, e.g., Bevenisti, *supra* note 27, at 844. See also less critical views on the Court's practice in relation to the margin of appreciation in M. Walzer, *Thick and Thin: Moral Argument at Home and Abroad* (1994).
[37] Shelton, *supra* note 27, at 131, 134.

B. Selected Case Law

In 2005, the Council of Europe adopted a 'Manual on Human Rights and the Environment', in which it was stated that although there is no express right to a clean environment, certain Articles of the Convention may give rise to environmental claims, such as the right to life; the right to family and private life; the right to information; the right to peaceful enjoyment of property; and the right to a fair hearing.[38] Based on the previous and extensive Court jurisprudence,[39] the 'Convention's implications for environmental protection' were summed up by Boyle in the following manner:[40]

1. The state has an obligation to regulate and control environmental problems where they impair the exercise of Convention rights and to ensure that the law is enforced.
2. The state also has an obligation to make available information concerning serious environmental risks, and to make provision for participation in environmental decision-making and access to justice in environmental cases.
3. Protection of the environment is a legitimate objective that in appropriate cases can justify limiting certain rights, including the right to private life and the right to possession and property. When balancing environmental concerns against convention rights and '[t]he Court has recognised that national authorities are the best placed to make decisions on environmental issues, which often have difficult social and technical aspects. Therefore in reaching its judgements, the Court affords the national authorities in principle a wide discretion . . .
4. An unsettled question referred to in the manual is whether Convention rights have trans-boundary application in environmental cases.[41]

This section of the chapter will present a survey of cases which gave rise to views that the ECtHR (to a certain extent) recognized the existence of a human right to a clean environment. However, it must be emphasized that there is no direct human right to a clean environment included in the catalogue of human rights in the ECtHR.

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[38] Committee of Experts for the Development of Human Rights, Doc. No DH-DEV (1995). See extensively A. Boyle, 'Human Rights or Environmental Rights? A Reassessment', 18 *Fordham Environmental Law Review* (2007), 471 at 485–6.

[39] See, e.g. *Lopez-Ostra v. Spain*, 20 EHRR (1994) 277; the two *Hatton v. United Kingdom* cases: 37 EHRR (2003) 28; *Fadeyeva v. Russia,* 45 EHRR (2005) 50; *Guerra v. Italy,* 26 EHRR (1998) 357; *Case of Öneryıldız v. Turkey,* 41 EHRR (2004) 20; *Taskin v. Turkey*, 42 EHRR (2006) 50; *Case of Budayeva and Others v. Russia*, EHRR 15339/02, 21166/02, 20058/02, 11673/02 and 15343/02, (2008).

[40] Boyle, *supra* note 38, at 486.

[41] *Ibid.* (footnotes omitted).

The jurisprudence of the ECtHR has definitely undergone a fundamental (if not dramatic) change in so far as environmental issues are concerned since the first cases with environmental elements were brought before the Court. It is generally accepted that the first case with an environmental element was brought before the Court in 1976.[42] In this case, *X and Y v. Federal Republic of Germany*, the applicants were members of an environmental organization and owners of a plot of land used for nature observation. The complaint concerned the use of the adjacent land for military purposes. The legal grounds on which the claim was brought were Articles 2,[43] 3[44] and 5[45] of the ECHR. However, the application was not admitted by the Commission (later abolished) on jurisdicitional grounds, as incompatible *rationae materiae* with the ECHR, and that the application was manifestly ill-founded as the ECHR does not include a right to nature preservation in its catalogue of rights and freedoms guaranteed by the Convention. In the intervening years (since the first cases with environmental elements), the practice of the ECtHR has undergone a fundamental and far-reaching change, and it has become legally possible

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[42] See, e.g., P. Sands, *Principles of International Environmental Law* (2003), at 299.

[43] Article 2: Right to Life, states:

'1. Everyone's right to life shall be protected by law. No one shall be deprived of this life intentionally save in the execution of a sentence of a court following his conviction of a crime for which penalty is provided by law. 2. Deprivation of life shall not be regarded a inflicted in contravention of this Article when it results from the use of force which is no more than absolutely necessary: a. in defence of any person from unlawful violence; b. in order to effect a lawful arrest or to prevent the escape of a person lawfully detained; c. in action lawfully taken for the purpose of quelling a riot or insurrection.'

[44] Article 3: prohibition of torture states: 'No one shall be subjected to torture or inhuman and degrading treatment'.

[45] Article 5: Right to Liberty and Security, states:

'1. Everyone has the right to liberty and security as a person. No one shall be deprived of his liberty save in the following cases in accordance with a procedure prescribed by law: (a) the lawful detention of a person after conviction by a competent court; (b) the lawful arrest or detention of a person for non-compliance with the lawful order of a court in order to secure fulfilment of any obligation proscribed by law; (c) the lawful arrest or detention of a person affected for the purpose of bringing him before the competent legal authority on reasonable suspicion of having committed an offence or when it is reasonably considered necessary to prevent his committing an offence or fleeing after having done so; (d) the detention of a minor by lawful order for the purpose of educational supervision or his lawful detention for the purpose of bringing him before the competent legal authority; (e) the lawful detention of persons for the prevention of the spreading of infectious diseases, of persons of unsound mind, alcoholics or drug addicts or vagrants; (f) the lawful arrest or detention of a person to prevent his effecting an unauthorised entry into the country or of a person against whom action is being taken with a view to deportation or extradition. 2. Everyone who is arrested shall be informed promptly, in a language which he understands, of the reasons for his arrest and of any charge against him.'

to bring a claim with an environmental component. The most commonly used Article of the Convention to lodge such a claim has been Article 8.[46] The other Articles also invoked included: 3, 6,[47] 10,[48] 13[49] and the First

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[46] Article 8: Right to Respect for Private and Family Life, states:

'1. Everyone has the right to respect for his private and family life, his home and his correspondence. 2. There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society, in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.'

[47] Article 6: Right to a Fair Trial, states:

'1. In the determination of his civil rights and obligations or of any criminal charge against him, everyone is entitled to a fair and public hearing within a reasonable time by an independent and impartial tribunal established by law. Judgment shall be pronounced publicly but the press and public may be excluded from all or part of the trial in the interests of morals, public order or national security in a democratic society, where the interests of juveniles or the protection of a private life of the parties so require, or to the extent strictly necessary in the opinion of the court in special circumstances where publicity would prejudice the interests of justice. 2. Everyone charged with a criminal office shall be presumed innocent until proved guilty according to law. 3. Everyone charged with a criminal offence has the following minimum rights: (a) to be informed promptly, in a language which he understands and in details, of the nature and cause of the accusation against him: (b) to have adequate time and facilities for the preparation of his defence: (c) to defend himself in person or through legal assistance of his own choosing or, if he has insufficient means to pay for legal assistance, to be given it free when the interests of justice so require; (d) to examine or have examined witnesses against him and to obtain the attendance and examination of witnesses on his behalf under the same conditions as witnesses against him; (e) to have free assistance of an interpreter if he cannot understand or speak the language used in court.'

[48] Article 10: Freedom of Expression, states:

'1. Everyone has the right to freedom of expression. This right shall include freedom to hold opinions and to receive and impart information and ideas without interference by public authority and regardless of frontiers. This Article shall not prevent States from requiring the licensing of broadcasting, television or cinema enterprises. 2. The exercise of these freedoms, since it carries with it duties and responsibilities, may be subject to such formalities, conditions, restrictions or penalties as are prescribed by law and are necessary in a democratic society, in the interests of national security, territorial integrity or public safety, for the prevention of disorder or crime, for the protection of health or morals, for the protection of the reputation or rights of others, for preventing the disclosure of information received in confidence, or for maintaining the authority or impartiality of the judiciary.'

[49] Article 13: Right to Effective Remedy, states:

'Everyone whose rights and freedoms as set in this Convention are violated shall have an effective remedy before the national authority notwithstanding that the violation has been committed by person acting in an official capacity.'

Protocol.[50] It may be observed that Article 8 of the ECHR guarantees rights that are not absolute, but qualified. The permissible limits of Article 8 are set by its paragraph 2. The infringement of this Article requires a two-step procedure: (1) the determination of whether or not there has been an interference with the right contained in this Article: and (2) the determination whether it was justified under Article 8 paragraph 2. Interference with the right may be justified if it is (i) in accordance with law; (ii) necessary in a democratic society; and (iii) in furtherance of a legitimate aim identified in Article 8(2). In many cases before it,[51] the ECtHR has explained that the test for necessity in 'democratic society' requires that 'the interference corresponds to a pressing social need and . . . is proportionate to the legitimate aim pursued'. The reasons given to justify the interference must be 'relevant' and 'sufficient'.[52] This is the so-called 'test of proportionality'. The tests of proportionality and the balancing of interests are at the heart of the jurisprudence of the ECtHR in cases which deal with human rights and the environment, i.e. involve to a larger extent the interpretation of Article 8 of the ECHR.

The majority of the earlier cases concerned noise pollution from London airports and were brought before the Court on the basis of Article 8 and the First Protocol. The most important of these early cases was *Raynor and Powell v. United Kingdom*, as in this case the Court made certain observations which had a bearing on its future jurisprudence.[53] This case concerned the noise generated by day flights to and from Heathrow Airport. It was brought by the applicants who lived under the flight path. The case was lodged against the Government of the United Kingdom for breach of Articles 8 and 13 of the ECHR for allowing the operation of Heathrow

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[50] First Protocol: Article 1: Protection of Property, states:

'Every natural or legal person is entitled to the peaceful enjoyment of his possessions. No one shall be deprived of his possessions except in the public interest and subject to the conditions provided for the law and by the general principles of international law. The preceding provisions shall not, however, in any way impair the right of a State to enforce such laws as it deems necessary to control the use of property in accordance with the general interest or to secure the payment of taxes or other contributions or penalties.'

[51] *Olsson v. Sweden*, 11 EHRR (1988) 259.

[52] *Ibid.*

[53] There was a cluster of cases that were settled outside the Court but have certain importance because they were admitted before the Court and paved the way for similar cases. For example, *Arrondelle v. United Kingdom*, 5 EHRR 118, in which the legal grounds for bringing the claim were the same as in *Raynor & Powell v. United Kingdom*, 12 EHRR 355. The claim was also related to the alleged noise pollution nuisance due to the development of the airport and the construction of the motorway (Application No. 7889/77) (1980) 19 DR 186; *Raynor and Powell v. United Kingdom*, ECtHR, Judgment of 21 February 1990, Ser. A, No. 172.

Airport which resulted in excessive noise by aircraft flying in accordance with UK law and that the applicants did not have an effective remedy against it. The Court rejected the application on the merits. Having applied the test of balancing the competing interests between the individuals and the community it came to the conclusion that, although the quality of life of the applicants had been disturbed, nevertheless the economic importance of Heathrow Airport (for the development of trade and communication, and being a vast employer) was necessary for the well-being of the community. The Court observed that the UK Government took all possible measures to alleviate the noise pollution by adhering to international standards and compensated affected residents. From 1949 onwards, the UK Government had addressed the issues of noise pollution by taking special regulatory measures.[54] The Court finally decided that in areas such as the regulation of noise pollution, the Court could fulfil only a subsidiary role and that the State authorities were best equipped to deal with such a complicated and difficult social and technical problem. Therefore 'this is an area Contracting States are to be recognised as enjoying a wide margin of appreciation'.[55]

The judgment in this case was a disappointment for many lawyers. However, in 1994, the ECtHR gave judgment in the *Lopez-Ostra* case,[56] which at the time appeared to be of a groundbreaking character (which in light of the further practice of the Court was perhaps a premature and hasty assessment). The applicant in this case was a resident of the city of Lorca in Spain. In 1988, a company called SACURSA erected a treatment plant for liquid and solid waste 12 metres from the home of the applicant (Mrs Lopez-Ostra). The plant was built with the assistance of municipal subsidies. However SACURSA failed to obtain the required licence for activities classified as causing a nuisance. In July 1988, fumes from the plant polluted the atmosphere in the city of Lorca. The applicant claimed unlawful interference with her abode and impairment of her and her family's physical and mental health and safety.[57] Courts at all levels in Spain, including the Constitutional Court, found the applicant's claim manifestly ill-founded and dismissed it. Having exhausted all local remedies, the applicant bought her claim before the ECtHR, on the basis of Articles 3 and 8, paragraph 1, of the ECHR.[58] The Strasbourg Commission considered the claim admissible under Article 8 of the ECHR, but not under Article 3.

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[54] Until 1949, the issue of noise pollution was regulated by the common law of nuisance.

[55] *Raynor and Powell v. UK*, *supra* note 53, at para. 44.

[56] *Lopez-Ostra*, 20 EHRR (1994) 277.

[57] *Ibid.*, at 280.

[58] *Ibid.*, at 286.

The Commission found a causal link between the emissions from the plant and the illness of the applicant's daughter. Subsequently, the judgment of the Court was delivered on the basis of Article 8. The Court stated that environmental pollution, even without causing serious damage to health, could affect the well-being of individuals and impede the enjoyment of their private and family life.[59] The Court made some very important pronouncements in this case in connection with human rights and the environment. It again applied the balancing of competing interests test (community as a whole versus the individual). The Court stated that the payment of the rent for the substitute apartment did not completely compensate for the nuisance suffered by the family for three years, and that the State did not strike the proper balance between the individual and public interests, i.e. between private well-being and general economic concern.[60] The Court also found that although the plant was privately owned, the nuisance was attributable to the State since the plant was built on public ground without the required licence being obtained, and was subsidized by the municipality. Furthermore, the public authorities were aware of the harm caused by the plant. The Court also observed that States have a supervisory duty over the actions carried out on their territory, in order to protect private and family life and homes.[61]

The Court's findings may be summarized as follows: pollution does not have to cause serious damage to human health, but rather must be 'severe', in order to give rise to a cause of action, and a privately owned facility's nuisance may be attributable to the State. Most importantly, it was the first case in which the Court recognized clearly environmental issues within the human rights structure and, even in the absence of an explicit environmental right in the ECHR, it found that Article 8 constitutes a proper and sufficient link to connect the two: human rights and the environment. It also should be emphasized that it was the first time that the Court had given a green 'slant' to its decisions while weighing the interests of a public and economic nature against the environmental complaint of the individual.

Anna Maria Guerra and 39 Others v. Italy was another important case.[62] This case concerned the pollution relating to the operation of the ENCHEM Agricoltura chemical factory in Italy. The case was brought before the Court on the basis of Article 10 of the ECHR. The applicants complained about the government's failure to inform the public concerning the risks and measures adopted in the implementation of the

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[59] *Ibid.*, at 295.
[60] *Ibid.*, at 295–99.
[61] *Ibid.*, at 296.
[62] *Guerra and Others v. Italy, supra* note 39.

so-called 1982 EC 'Seveso' Directive, relating to major hazards of certain industrial activities. There had been accidents in the factory in the city of Manfredonia in Italy which resulted in 150 people being taken to hospital. The Commission admitted the case on the basis of Article 10. However, it interpreted the obligation included therein narrowly as not involving the positive duty to collect and disseminate information of its own volition. It held that Article 10 generally only prohibits the government from interfering with a person's freedom to receive information that others are willing to impart.[63] During oral pleadings, the applicants expanded the legal basis of the case to include Article 8 of the ECHR, which was accepted by the Court. The Court based its judgment in this case on this legal ground. The interpretation of Article 8 in this case followed the Court's findings in the *Lopez-Ostra* case. The Court confirmed that environmental pollution, without being severe, might affect individuals' well-being and private and family life.[64] It explained that rights guaranteed by this Article were breached, as the long waiting period for essential information, necessary for the evaluation of risks involved, to which the applicants and their families were exposed affected family life. The Court stated that '[t]he direct effect of toxic emissions on the applicants' right for their private and family life means that Article 8 is applicable'.[65]

Of great importance for the further development of the Court's jurisprudence in matters of human rights and the environment were the two *Hatton* (2001 and 2003) cases.[66] These cases concerned night flights over Heathrow Airport which, as was argued by the applicants, disturbed their sleep. The United Kingdom Government conducted several research studies, and in 1993 issued the Consultation Paper, which stated that the number of disturbances caused by aircraft noise was so small that 'it had

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[63] It must be noted, however, that eight out of 20 judges expressed the view in their separate opinions that a positive duty to collect and disseminate information might exist under certain circumstances.

[64] *Guerra and Others*, *supra* note 39.

[65] *Ibid*., at para. 75.

[66] *Hatton and others v. United Kingdom,* ECtHR, Judgment of the Chamber of 2 October 2001 (hereinafter the 'first *Hatton* case'); *Hatton and Others v. United Kingdom,* ECtHR, Judgment of the Grand Chamber of 8 July 2003 (hereinafter the 'second *Hatton* case'). See on the first *Hatton* case H. Post, 'Hatton and Other: Further Clarification of the "Indirect" Individual Right to a Healthy Environment'. 2 *Non-State Actors and International Law* (2002) 259, at 259–77; R. Smith, 'Hatton v. United Kingdom', 96 *AJIL* (2002) 692, at 692–9; A. Layard, 'Night Flights: A Surprising Victory', 4 *Envtl. L. Rev.* (2002) 51, at 51–61; on the second *Hatton* case see H. Post, 'Judgment of the Grand Chamber in the Hatton and Others v. United Kingdom, or What is Left of the Indirect Right to a Healthy Environment', 4 *Non-State Actors and International Law* (2004) 135, at 135–57; C. Miller, 'Environmental Rights in a Welfare State? A Comment on DeMerieux', 23 *Oxford J. Legal Stud.* (2003) 111, at 111–25.

a negligible effect on overall normal disturbances and that disturbances rates from all causes were not at the level likely to affect people's health and well-being'.[67] Based on the 1994 Scheme, each aircraft type was assigned a 'quota count' between 0.5 QC and 16QC. Heathrow Airport was then allotted a certain number of quota points and the aircraft movements had to be kept to within the permitted total point number.[68] Aircraft operators could then select whether to operate a greater number of quieter aircraft, or fewer noisier ones. Night flights of noisier aircrafts were prohibited and night flights were based on the 'night quota period' (which varied between the summer and winter periods). The new Scheme of 1999 did not introduce any major changes as regards the situation of night flights at Heathrow Airport. The applicants argued the violation of Articles 8 and 13 of the ECHR. The UK Government argued that night flights were necessary for the country's well-being since they constituted an integral part of the global network of air services, inexorably linked with day-time flights. The government sought the justification for such flights under Article 8, paragraph 2, of the ECHR.[69] It also argued that the night flights scheme for all major London airports (Heathrow, Gatwick and Stansted) was more restrictive than in any other main European hub airport, such as Amsterdam Schiphol, Paris Charles de Gaulle and Frankfurt, and the imposition of even more restrictions would adversely affect the competitiveness of Heathrow Airport. The applicants, however, challenged this assertion, and observed that other leading world business centres such as Berlin, Zurich and Tokyo introduced a total ban at their airports on passenger night flights.[70] On 2 October 2001, the Chamber of the ECtHR observed that Heathrow Airport and the aircraft used were not owned, controlled or operated by the UK Government or its agents. The Chamber considered that, accordingly, the United Kingdom could not be said to have 'interfered' with the applicants' private or family life. Rather, the applicants' complaints fell to be analysed in terms of a positive duty on the State to take reasonable and appropriate measures to secure the applicants' rights under Article 8, paragraph 1, of the Convention.[71]

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[67] The second *Hatton* case, *supra* note 66, at para. 40.

[68] *Ibid.*, at para. 44. The 1993 Scheme defined the 'night' as the period between 11 p.m. and 7 a.m. and the 'night quota period' as between 11:30 p.m. and 5 a.m.

[69] British Airways PLC (BA) in its written comments stated that the ban on some of the night flights at Heathrow Airport would have a disastrous and disproportionate effect on its competitiveness, due to damage to the network and to scheduling problems, especially for long-haul arrivals. However, the Applicants submitted a report by Berkeley Hanover Consulting disputing these allegations.

[70] First *Hatton* case, *supra* note 66, at para. 114.

[71] *Ibid.*, at para. 95.

The Chamber referred to the 'fair balance' which must be struck between the competing interests of the individual and the community as a whole. In both contexts, the Chamber admitted, the State enjoyed a certain margin of appreciation in determining steps to be taken to ensure compliance with the Convention.[72] The Chamber explained that in striking the required balance States must consider the whole range of material considerations. Further, in the particularly sensitive field of environmental protection, mere reference to the economic well-being of the country was not sufficient to outweigh the rights of others. The Chamber considered that States were required to minimize, as far as possible, interference with rights under Article 8 by trying to find alternative solutions and by generally seeking to achieve their aims in the least onerous manner as regards human rights. To achieve that, a proper and complete study, with the aim of finding the best possible solution that would in reality strike the right balance, should precede the relevant project.[73] The Chamber found that despite the margin of appreciation left to States, the UK Government, in the implementation of the 1993 Scheme, failed to strike a fair balance between the country's economic well-being and the applicants' effective enjoyment of their right to respect for their homes and family lives, and therefore contravened Article 8 of the ECHR.[74]

As to Article 13, the applicants argued the lack of private law rights in relation to excessive night noise as a consequence of the statutory exclusion of liability in section 76 of the Civil Aviation Act 1982. According to them the limits inherent in an application for judicial review meant that it was not an effective remedy, in particular the fact that the issues arising under Article 8 could not be addressed in a process of judicial review, and that the arguments which had been raised by the local authorities concerning the substance of Article 8 in the four applications for judicial review were rejected on the ground that they fell outside the scope of the Grand Chamber's power of review. They also mentioned the high cost of lodging an application for judicial review.[75]

The UK Government denied any arguable claim by the applicants of a violation of Article 8 and argued that, accordingly, no issue of entitlement to a remedy under Article 13 arose. Alternatively, it submitted that, as the requirements of Article 13 are less strict than and are subsumed by those of Article 6, and as Article 6 would have applied had it not been for the exclusion of liability in section 76 of the 1982 Act, no separate issue

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[72] *Ibid.*, at para. 96.
[73] *Ibid.*, at para. 97.
[74] *Ibid.*, at para. 107.
[75] *Ibid.*, at para. 110.

arose under Article 13. It contended that the remedy of judicial review was available to the applicants. It also noted the wide margin of discretion enjoyed by national authorities in relation to the decision to implement the 1993 scheme. It also claimed that judicial review was an effective remedy and that courts had the power to set aside schemes on a variety of administrative law grounds (for example, irrationality, unlawfulness or patent unreasonableness).[76]

The Chamber held that Article 13 has been interpreted by the Court as requiring a remedy in domestic law only in respect of grievances which could be regarded as 'arguable' in terms of the Convention. In the present case, there has been a finding of a violation of Article 8, and the complaint under Article 13 must therefore be considered. Section 76 of the 1982 Act prevents actions in nuisance in respect of excessive noise caused by aircraft at night. The Chamber addressed the question whether the applicants had a remedy at national level to enforce the substance of the Convention rights to be secured in the domestic legal order. It was on this basis that judicial review was held to comply with the requirements of Article 13. In one of the cases, the Chamber concluded that judicial review was not an effective remedy on the ground that the domestic courts defined policy issues so broadly that it was not possible for the applicants to make their Convention points regarding their rights under Article 8 in the domestic courts. The Chamber observed:

> it is clear that the scope of review by the domestic courts was limited to the classic English public law concepts, such as irrationality, unlawfulness and patent unreasonableness, and did not allow consideration of whether the increase in night flights under the 1993 scheme represented a justifiable limitation on their right to respect for the private and family lives or the homes of those who live in the vicinity of Heathrow airport. In these circumstances, the Grand Chamber considers that the scope of review by the domestic courts in the present case was not sufficient to comply with Article 13.[77]

The Chamber therefore found that there had been a violation of Article 13 of the Convention.

Judge Greve, in her partly dissenting opinion (as to Article 8 but not Article 13), expressed the view that in the light of the wide margin of appreciation in such cases, it was sufficient to rely only on the limited scope of facts submitted by the Government, i.e. that the UK Government conducted a sufficient inquiry into the noise generated by the night flights

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[76] *Ibid.*, at paras 111–12.
[77] *Ibid.*, at paras 114–15.

and that the relevant decision-making process was correct. Sir Brian Kerr dissented from the judgment in relation to both Articles 8 and 13. His dissenting opinion may be summarized as follows: the significant interference with the applicants' private lives had not been established (they retained the freedom to move elsewhere and house prices were not affected); the UK Government had conducted a sufficient inquiry into the noise effects of night flights and had introduced several protective measures, and had therefore complied with the prohibition of undue interference in private life; that night flights undoubtedly contributed to the country's economic well-being; and, finally, that the requirement of more detailed research would place a very heavy burden on the Government. He also opposed the findings of the majority as regards the test of minimum interference in this case as difficult to reconcile with the principle of the margin of appreciation. The applicants presented very few arguments to substantiate their claim and the macro-economic issue outbalanced these. Therefore such cases should have been dealt with more properly within the political rather than the judicial sphere. As regards Article 13, he claimed that it is limited to cases in which grievances are arguable under the Convention, whilst in the *Hatton* case, Article 8 was not arguable, as claims under it 'must so clearly be decided in the Government's favour'.

The UK Government requested the referral of the case to the Grand Chamber. It strongly objected in its written and oral submissions to the 'minimum interference' approach as outlined in paragraph 97 of the judgment in the first *Hatton* case. The Government argued that this test, in the context of the *Hatton* case, was at variance with the jurisprudence of the Grand Chamber and was, in principle, unwarranted. It claimed that the test 'reduced to vanishing-point the margin of appreciation' accorded to States in an 'area involving difficult and complex balancing of a variety of competing interests and factors'.[78] The Government stressed that the number of very sensitive issues that were involved in that case were better resolved by national authorities, as they were better placed than a Grand Chamber to evaluate local conditions.[79] Furthermore, it was observed that in this context the Grand Chamber played a supervisory role.[80]

On the other hand, the applicants argued that the aircraft noise was capable of infringing the rights protected by Article 8, that the States had a positive duty to ensure adequate protection of these rights, that in this case the States had struck the wrong balance between competing

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[78] Second *Hatton* case, *supra* note 66, at para. 87.
[79] *Ibid.*, at para. 88.
[80] *Ibid.*, at para. 89.

interests[81] and that in the case of sleep deprivation, the margin of appreciation should be narrow, since it was a matter that could be judged only by similar standards in similar Contracting Parties.[82] The applicants also argued that the doctrine of the margin of appreciation does not play a role in this case, since an international judge was well placed to evaluate the adequacy of the procedural safeguard applied by the State.

The Grand Chamber stated in no uncertain terms that 'there is no explicit right under the Convention to a clean and quiet environment', and that only when the 'individual is directly and seriously affected by noise or other pollution, an issue may arise under Article 8'.[83] The Grand Chamber reiterated the fundamentally subsidiary role of the Grand Chamber in such cases. National authorities have direct democratic legitimacy and are, as was stressed several times by the Grand Chamber, better placed than an international tribunal to assess local needs and conditions. In matters of general policy, which may involve different opinions contained within democratic society, the role of domestic policy-makers should be given special weight; in particular in matters relating to the implementation of social and economic policies, where the margin of appreciation should be wide.[84] Further, the ECtHR made a very important comment that in cases like *Hatton*, involving State decisions on environmental issues, there are two aspects to be analysed by the Grand Chamber. First, it may evaluate the substantive merits of the Government's decision, to ensure compatibility with Article 8; secondly, it may assess the decision-making process to ensure that the interests of an individual have been granted due weight.[85] The Grand Chamber also noted the importance of striking the required balance between the interests of the individual and the community, a task which enjoys a certain margin of appreciation on the part of the Government in the determination of the steps to be taken to ensure compliance with the Convention and the implementation of a positive duty deriving from Article 8, paragraph 1, of the ECHR. In striking the required balance, the aims mentioned in paragraph 2 may be of certain relevance.[86] The Grand Chamber once again expressed its staunch support for the wide margin of appreciation in cases such as *Hatton*. It explained, as it did in many earlier cases, that it is a task for national authorities to make an initial assessment of the 'necessity' for interference, as regards both the

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[81] *Ibid.*, at para. 90.
[82] *Ibid.*, at para. 91.
[83] *Ibid.*, at para. 96.
[84] *Ibid.*, at para. 98.
[85] *Ibid.*, at para. 99.
[86] *Ibid.*, at para. 97.

legislative framework and the particular measures of implementation. The Grand Chamber's task is to review such a national measure. The margin of appreciation is not identical in each case, but will vary depending on the context involving the nature of the conventional rights at issue, its importance and the nature of the activities concerned.[87] In cases such as *Hatton*, the Grand Chamber also acknowledged the importance of taking into account, while balancing the interests of the community and the individual and evaluating the margin of appreciation, the applicant's right in respect of 'home', a right which pertains to the applicant and children's personal security and well-being. Furthermore, since it concerns procedural safeguards, while Article 8 contains no explicit procedural requirements, the decision-making process resulting in interference 'must be fair and such as to afford due respect for interests safeguarded to the individual by Article 8'.[88]

In the second *Hatton* case, one of the main tasks before the Grand Chamber was to adjudge the issues of the scope of the applicable margin of appreciation. The Government and the applicants represented very conflicting views. The Government advocated a wide margin of appreciation on the ground that the case concerned a matter of general policy. The applicants argued that where the ability to slip is affected, the scope of the margin of appreciation is narrow because of the 'intimate' nature of the rights safeguarded. The ECtHR made a very important statement that the conflict of views on the scope of the margin of appreciation can be resolved only by reference to the context of a particular case.[89] The Grand Chamber observed that in the *Hatton* case the noise disturbances complained of were not caused by the State or by State organs, but originated from the activities of private operators and that:

> It may be argued that the changes brought about by the 1993 Scheme are to be seen as a direct interference by the State with the Article 8 rights of the persons concerned. On the other hand, the State's responsibility in environmental cases may also arise from a failure to regulate private industry in a manner securing proper respect for the rights enshrined in Article 8 of the Convention. As noted above . . . broadly similar principles apply whether a case is analysed in terms of a positive duty on the State or in terms of an interference by a public authority with Article 8 rights to be justified in accordance with paragraph 2 of this provision. The Grand Chamber is not therefore required to decide whether the present case falls into the one

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[87] See, e.g., *Buckley v. United Kingdom*, Judgment of 25 September 1996, 23 EHRR (1996) 101, at 129.

[88] Second *Hatton* case, *supra* note 66, at para. 101, citing paras 74 and 75 of the *Buckley* judgment.

[89] Second *Hatton* case, *supra* note 66, at para. 103.

> category or the other. The question is whether, in the implementation of the 1993 policy on night flights at Heathrow Airport, a fair balance was struck between the competing interests of the individuals affected by the night noise and the community as a whole.[90]

The Grand Chamber further stated that:

> The Grand Chamber must consider whether the State can be said to have struck a fair balance between those interests and the conflicting interests of the persons affected by noise disturbances, including the applicants. Environmental protection should be taken into consideration by States in acting within their margin of appreciation and by the Grand Chamber in its review of that margin, but it would not be appropriate for the Grand Chamber to adopt a special approach in this respect by reference to a special status of environmental human rights. In this context the Grand Chamber must revert to the question of the scope of the margin of appreciation available to the State when taking policy decisions of the king at issue. . . .[91]

The ECtHR also emphasized that in this case, in contrast to other similar cases before it, national authorities did not fail to comply with some aspect of the domestic regime.[92] The Grand Chamber then proceeded to analyse all factors that have to be considered while striking a fair balance: economic interests (the Grand Chamber assumed that night flights contributed at least to a certain extent to the general economy); the availability of measures adopted by the Government to mitigate the effects of aircraft noise generally, including night noise (the Grand Chamber assessed these measures as reasonable); that the cost of houses in this area had not depreciated and people living there, if they so chose, could move elsewhere without financial loss and that this factor must be significant to the overall reasonableness of the general measure; and, finally, that it was 'difficult if not impossible to draw a clear line between the interests of the aviation industry and the economic interests of the country as a whole'.[93]

As to the procedural aspect, the Grand Chamber stated:

> the Grand Chamber notes that a governmental decision-making proceed concerning complex issues of environmental and economic policy such as in the present case must necessarily involve appropriate investigations and studies in order to allow them to strike a fair balance between the various conflicting interests at stake. However, this does not mean that decision can only be taken if comprehensive and measurable data are available in relation to each and

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[90] *Ibid.*, at para. 119.
[91] *Ibid.*, at para. 122.
[92] *Ibid.*, at para. 120.
[93] *Ibid.*, at para. 126.

> every aspect of the matter to be decided. In this respect it is relevant that the authorities have consistently monitored the situation, and that the 1993 Scheme was the latest in a series of restrictions on night flights which stretched back to 1962. The position concerning research into sleep disturbance and night flights is far from static, and it was the government's policy to announce restrictions on night flights for a maximum of five years at a time, each new scheme taking into account the research and other developments of the previous period. The 1993 Scheme had thus been preceded by a series of investigations and studies carried out over a long period of time. The particular new measures introduced by that scheme were announced to the public by way of a Consultation Paper which referred to the results of a study carried out for the Department of Transport, and which included a study of aircraft noise and sleep disturbance. It stated that the quota was to be set so as not to allow a worsening of noise at night, and ideally to improve the situation. This paper was published in January 1993 and sent to bodies representing the aviation industry and people living near airports. The applicants and persons in a similar situation thus had access to the Consultation Pater, and it would have been open to them to make any representations they felt appropriate. Had any representations not been taken into account, they could have challenged subsequent decision, or the scheme itself, in the Grand Chambers. Moreover, the applicants are, or have been, members of HACAN (see paragraph 1 above), and were thus particularly well-placed to make representations. [94]

Having taken all the above into consideration the Grand Chamber stated as follows:

> In these circumstances the Grand Chamber does not find that, in substance, the authorities overstepped their margin of appreciation by failing to strike a fair balance between the right of the individuals affected by those regulations to respect for their private life and home and the conflicting interests of others and of the community as a whole, nor does it find that there have been fundamental procedural flaws in the preparation of the 1993 regulations on limitations for night flights.[95]

The Grand Chamber agreed with the findings of the Chamber that there were violations of Article 13, as the scope of the review was limited to the classic English public law concepts, such as rationality, unlawfulness and patent unreasonableness. Prior to the entry into force of the Human Rights Act 1998, the consideration of whether the increase in night flights under the 1993 Scheme represented a justifiable limitation on the right to respect for the private and family life of persons living in the vicinity of Heathrow Airport did not fall within the remit of judicial review. Therefore the Grand Chamber found that the scope of the review by domestic Grand

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[94] *Ibid.*, at para. 128.
[95] *Ibid.*, at para. 129.

Chambers (ECtHR) was not sufficient to comply with the requirements of Article 13.

It may be noted that a minority of judges appended a powerful joint dissenting opinion.[96] The dissenting judges argued that the application of the 'evolutive' interpretation of the Convention leads to the construction of the human right to a clean environment based on Article 8 of the Convention:

> In the field of environmental human rights, which was practically unknown in 1950, the Commission and the Court have increasingly taken the view that Article 8 embraces the right to a healthy environment, and therefore to protection against nuisance caused by harmful chemicals, offensive smells, agents which precipitate respiratory ailments, noise and so on.[97]

They further claimed that the Court had confirmed on several occasions, prior to the second *Hatton* case, such as in the *Lopez-Ostra* case, that Article 8 guarantees the right to a healthy environment and that unfortunately the judgment in the second *Hatton* case appeared to deviate from these developments and 'even takes [a] step backwards',[98] and that the UK Government did not substantiate sufficiently the economic importance of Heathrow Airport for the country.

Commentators on the second *Hatton* case observed that the Court favoured the less protective approach towards rights aiming at minimizing States' interference with Article 8 rights, by seeking alternative solutions and by trying to fulfil their aims in the manner which was least damaging to human rights.[99] The Court in the second case reiterated its finding in the *Raynor and Powell* case. The present author agrees with this assessment of the judgment.

The jurisprudence of the Court in environmental matters was further developed in the 2005 case of *Fadeyeva v. Russia*.[100] The case related to air pollution from a Severstal steel plant built in Soviet times, currently privately owned. The plant was responsible for more than 95 per cent of the industrial emissions into the town's air. The applicant lived with her family within the security zone and sought resettlement outside this zone.

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[96] Joint Dissenting Opinion of Judges Costa, Ress, Türmen, Zupančič and Steiner.

[97] *Ibid.*, at para. 2.

[98] *Ibid.*, at para. 5.

[99] A. Layard, 'Human Rights in the Balance – Hatton and Maricic', 6 *Envtl. L. Rev.* (2004) 196, at 201.

[100] *Case of Fadeyeva v. Russia*, *supra* note 39; see P. Leach, 'Stay Inside When the Wind Blows Your Way – Engaging Environmental Rights with Human Rights: Fadeyeva v Russia judgment of the European Court of Human Rights, 9 June 2005', 4 *Envtl. Liability* (2005) 91, at 91–7.

The applicant obtained the Court's order to do so. However, there was no priority waiting list and she was the 6,820th on the general waiting list. Her case was dismissed in local, regional and national courts. She relied on Article 8 of the ECHR.

There was no dispute as to the fact that the applicant's place of residence was affected by industrial pollution, nor was it disputed that the main cause of pollution was the Severstal steel plant operating near the applicant's home. The degree of disturbance caused by Severstal and the effects of pollution on the applicant were disputed by the parties. On one hand, the applicant asserted that the pollution seriously affected her private life and health; on the other hand, the respondent Government argued that the degree of harm suffered by the applicant was not such as to raise an issue under Article 8 of the Convention. Therefore, the Court had first to establish whether the situation complained of by the applicant should be examined under Article 8 of the Convention.[101]

The Court observed that Article 8 had formed a ground in several cases involving environmental concern. However, it was not breached every time that environmental deterioration occurred. The Court again noted that no right to natural preservation as such was included among the rights and freedoms guaranteed by the Convention. Thus, in order to raise an issue under Article 8 specific conditions had to be fulfilled: (a) the interference had directly to affect the applicant's home, family or private life; and (b) the adverse effects of environmental pollution had to attain a certain minimum level if they were to fall within the scope of Article 8.

The Court further clarified that the assessment of that minimum level was not general but relative, i.e. it depended on all the circumstances of the case (such as the intensity and duration of the nuisance, and its physical or mental effects). The general environmental context should also be taken into account (for example, there would be no claim under Article 8 if the harm complained of was negligible in comparison to the environmental hazards inherent in life in every modern city). Therefore, in conclusion, the Court said that:

> in order to fall under Article 8, complaints relating to environmental nuisances have to show, first, that there was an actual interference with the applicant's private sphere, and, second, that a level of severity was attained.[102]

The Court noted that the State recognized many times that the environmental situation in the town of Cherepovets caused an increase in the morbidity

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[101] *Case of Fadeyeva v. Russia*, *supra* note 39, at paras 67 and 68.
[102] *Ibid.*, at para. 70.

rate for the city's residents.[103] The Court stressed that the domestic courts recognized the applicant's right to be resettled and that the domestic legislation itself defined the zone in which the applicant's house was situated as unfit for habitation. 'Therefore, it can be said that the existence of interference with the applicant's private sphere was taken for granted at the domestic level.'[104] The Court accepted that the actual detriment to the applicant's health and well-being had reached a level sufficient to bring it within the scope of Article 8 of the Convention.[105] Further the Court reiterated statements made in the second *Hatton* case. The Court noted that, at the relevant time, the Severstal steel plant was not owned, controlled or operated by the State. Consequently, the Russian Federation had not directly interfered with the applicant's private life or home. However, the Court observed that the State's responsibility in environmental cases might arise from a failure to regulate private industry. Therefore, the applicant's complaints fell to be analysed in terms of a positive duty on the State to take reasonable and appropriate measures to secure the applicant's rights under Article 8, paragraph 1, of the Convention. The Court first assessed 'whether the State could reasonably be expected to act so as to prevent or put an end to the alleged infringement of the applicant's rights'.[106] The Severstal steel plant was built by and initially belonged to the State, and from the beginning had contaminated and caused health problems and nuisance to many people in Cherepovets. In 1993, the plant was privatized. However, the State exercised control over the plant through the imposition of operating conditions and supervision of their implementation. The plant was subjected to inspections by the State environmental agency, and administrative penalties were imposed on the plant's owner and management. The municipal authorities knew of the environmental situation and imposed certain sanctions.[107]

In this case, the Court gave further guidance on the application of Article 8, paragraph 2, of the ECHR, drawing on its previous jurisprudence, i.e. it interpreted the doctrine of proportionality. The Court discussed the general principles, 'the legitimate aim', and 'necessary in a democratic society'. The Court confirmed that in the event of a breach of a positive duty or direct interference by the State, the applicable principles regarding justification under Article 8, paragraph 2, in order to balance the rights of an individual and the interests of the community as a whole are similar. To

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[103] *Ibid.*, at para. 85.
[104] *Ibid.*, at para. 86.
[105] *Ibid.*, at para. 88.
[106] *Ibid.*, at para. 89.
[107] *Ibid.*, at para. 90.

be compatible with paragraph 2, direct interference by the State with the exercise of Article 8 rights must be in accordance with the law. The breach of domestic law in these cases would result in a violation of the Convention. However, the choice of means where there is a duty for the State to take positive measures is, in principle, a matter of the States' margin of appreciation. There are various means to ensure 'respect for private life', and a State which has failed to apply one particular measure provided by domestic law may find an alternative way to fulfil its positive duty. 'Therefore, in those cases the criterion 'in accordance with the law' of the justification test cannot be applied in the same way as in cases of direct interference by the State.'[108] The Court further observed that in all previous cases of environmental breaches, a failure by the national authorities to comply with some aspect of the domestic legal regime played a pivotal role. Therefore, in cases where the applicant complains about the State's failure to protect Convention rights, domestic legality should be assessed:

> not as a separate and conclusive test, but rather as one of may aspects which should be taken into account in assessing whether the State has struck a 'fair balance' in accordance with Article 8 §2.[109]

In relation to 'legitimate aim', the Court made following statements:

> Where the State is required to take positive measures in order to strike a fair balance between the interests of the applicant and the community as a whole, the aims mentioned in the second paragraph of Article 8 may be of a certain relevance, although this provision refers only to 'interferences' with the right protected by the first paragraph – in other words, it is concerned with the negative obligations flowing there from.[110]

The essential justification offered by the Government for the refusal to resettle the applicant was the protection of the interests of other residents of Cherepovets who, just like the applicant, were entitled to free housing under the domestic legislation. The municipality had only limited resources at its disposal with which to offer housing, and the applicant's immediate resettlement would breach the rights of others on the waiting lists. The respondent Government argued the importance of the plant for the economic well-being of the country. The Court was of the view that the operation of the steel plant in question contributed to the economic system of the Volga region, and therefore served a legitimate aim within the meaning of

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[108] *Ibid.*, at para. 96. See also paras 94–5.
[109] *Ibid.*, at para 98.
[110] *Ibid.*, at para. 99.

Article 8, paragraph 2, of the Convention. However, the issue to be determined is 'whether, in pursuing this aim, the authorities have struck a fair balance between the interests of the applicant and those of the community as a whole'.[111]

The Court then analysed the meaning of 'necessary in a democratic society'. The Court confirmed that a margin of appreciation is best left to the national authorities, who are in principle better placed than an international court to assess local needs and conditions. The Court, however, reviews whether the justification given by the State is relevant and sufficient, leaving it to the national authorities to make the initial assessment of 'necessity'.[112] The Court also chose to refrain from revising domestic environmental policies (e.g. in the *Hatton* case the Court held that it would not be appropriate for the Court to adopt a special approach in this respect by reference to a special status of environmental human rights[113]. The Court explained that:

> the complexity of the issues involved with regard to environmental protection renders the Court's role primarily a subsidiary one. The Court must first examine whether the decision-making process was fair and whether it afforded due respect to the interests safeguarded to the individual by Article 8 and only in exceptional circumstances may it go beyond this line and revise the material conclusions of the domestic authorities.[114]

The Court, having interpreted and analysed the implementation of Article 8 of the ECHR, found that the Russian Federation:

> despite the wide margin of appreciation left to the respondent State . . . failed to strike a fair balance between the interest of the community and the applicant's effective enjoyment of her right to respect for her home and her private life. There has accordingly been a violation of Article 8.[115]

Although in this case the applicant won, it may be said that the Court had confirmed the main principles elaborated in relation to the interpretation of Article 8 (as laid down in the second *Hatton* case) in adjudicating the

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[111] *Ibid.*, at para. 100.

[112] *Ibid.*, at paras 102–103. For example, in 1991 in *Fredin v. Sweden*, the Court recognized that 'in today's society the protection of the environment is an increasingly important consideration', and held that the interference with a private property right (revoking the applicant's licence to extract gravel from his property on the grounds of nature conservation) was not inappropriate or disproportionate in the context of Article 1 of Protocol No. 1 to the Convention.

[113] Second *Hatton* case, *supra* note 66, at para. 122.

[114] *Ibid.*, at para. 105.

[115] *Ibid.*, at para. 134.

cases with alleged breaches of 'environmental rights'. The Court adhered to a wide margin of appreciation and the strict application of this Article to environmental breaches. Most importantly, the Court emphasized that the catalogue of rights contained in the ECHR does not include human right to a clean environment, and environmental issues, in so far as they relate to human rights, are relevant only in the context of their effect on home, private and family life, i.e. within the legal framework of Article 8, not as an independent human right to a clean environment.

Finally, mention must be made of two cases before the ECtHR which have an environmental element and were brought before it on the basis of Article 2 and Article 1 of Protocol 1 to the Convention: the 2002 and 2004 case of *Öneryıldız v. Turkey*[116] and the 2008 case of *Budayeva and Others v. Russia*.[117] The first of these cases was first subject of a judgment of the Chamber of the Court and, upon appeal from the Government of Turkey, the Grand Chamber issued a judgment which upheld the findings of the Chamber. Broadly speaking, the case concerned a vast waste-collection site, set up in contravention of the Environmental Act and the Regulations on Solid-Waste Control. This waste site was near to the slum dwelling area. In April 1993, a methane explosion occurred at the site. It was followed by a mudslide caused by increasing pressure. The refuse erupted from the mountain of waste and engulfed some ten slum dwellings situated below it. Thirty-nine people died in the accident. The Grand Chamber agreed with the Chamber's finding that the administrative and municipal authorities knew or ought to have known that there was a real and an immediate risk to certain people living in the vicinity of the rubbish tip. Therefore they had a positive obligation under Article 2 of the Convention to take preventive operational measures necessary and sufficient to protect those individuals, especially as they themselves had set up the site and authorized its operation. These authorities acted in contravention of the above-mentioned law and acted against the recommendation of the Environmental Office of the Prime Minister. Similar findings relate to the legal ground of the case based on Article 1 of Protocol 1 to the ECHR.

The Court also found a causal link between gross negligence attributable to the State and the loss of human lives. According to the Court the resulting infringement does not amount to interference but to the breach of positive obligation, 'since the State officials and authorities did not do everything within their power to protect the applicant's proprietary interests' (paragraph 135).

The *Budayeva* et al. cases relate to the alleged negligence of the authorities

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[116] *Case of Öneryıldız v. Turkey*, *supra* note 39.
[117] *Case of Budayeva and Others v. Russia, supra* note 39.

in the city of Tyranauz in 2000 to mitigate the result of the mudslide, which resulted in deaths and the destruction of property. The facts of this case are very similar those in *Öneryıldız*. Therefore, the reasoning in this case is based on that in the latter case and the Court often refers to the *Öneryıldız* case whilst developing the argument in *Budayeva* et al.

In the *Budayeva* case, the Chamber of the Court, just as in the *Öneryıldız* case, analysed the applicability of Article 2 of the ECHR. First, it stated that Article 2 does not solely concern deaths resulting from the use of force by agents of the State, but it also, in the first sentence of its first paragraph, lays down a positive obligation on States to take appropriate measures to safeguard the lives of those within their jurisdiction. This obligation first imposes on a State a duty to promulgate a legislative and administrative framework designed to provide effective deterrence against the threats to life. This, as was stated in the *Öneryıldız* case, must be applied within the context of any activity, public or private, 'in which the right to life may be at stake' (paragraph 130). The Court has interpreted the obligation of a State to safeguard the lives of those within its jurisdiction as to include both substantive and procedural aspects, i.e. a positive obligation to take regulatory measures and adequately inform the public about any life-threatening emergency, and to ensure that any deaths caused thereby would be followed by a judiciary enquiry. The Court further explained what is meant by the substantive aspect in the particular context of dangerous activities. Special emphasis must be placed on regulations aimed at the special features of the activity in question, with special attention to the level of the potential risk to human lives. Such regulations must govern the licensing, setting up, operation, security and supervision of the activity and must make it compulsory for all concerned to take practical measures to ensure the effective protection of citizens whose lives may be endangered by the inherent risks. These preventive measures include most importantly the public's right to information, as established in the case law of the Convention's institutions. The relevant regulations must also provide the appropriate procedures, considering the technical aspects of the activity, for the purpose of identifying shortcomings in the processes concerned and any errors committed by those responsible at different levels.

Very interestingly, the Court stated that in the context of dangerous activities the scope of the positive obligations under Article 2 largely overlaps with those under Article 8. Consequently, the principles developed in the Court's jurisprudence relating to planning and environmental matters affecting private life and home may also be relied on for protection of the right to life. The Court stressed in the case, as in many other cases with an environmental component, that as to the choice of practical, positive measures, the choice of means principally falls within the Contracting Parties' margin of appreciation. As the Chamber stated:

> There are different avenues to ensure Convention's rights, and even if a State has failed to apply one particular means provided by domestic law, it may still fulfil its positive duty by other means,

as was stated in, *inter alia, Fadeyeva v. Russia*.

As regards the scope of the margin of appreciation, an impossible or disproportionate burden must not be imposed on the authorities without consideration being given, in particular, to operational choices which they must make in terms of priorities and resources, in difficult social and technical spheres, as was explained in the *Hatton* case, especially in cases of meteorological events beyond human control.

The assessment of the compliance by a State with the positive obligation is made by the Court on a case-by-case basis, having regard to the following circumstances, such as: the domestic legality of the authorities' acts or omissions (as was indicated in the *Lopez-Ostra* case; the domestic decision-making process (including appropriate investigations and studies); and the complexity of the issue, especially when conflicting interests are involved (as indicated in the *Hatton* et al. and *Fadeyeva* cases. The Court stressed the particular circumstances of cases when natural disaster strikes. The State in cases of this kind is protecting human rights through the mitigation of natural hazards. The scope of the positive obligation imputable to the State in the particular circumstances would depend on the origin of the threat and the extent to which one or the other risk is susceptible to mitigation. Article 2 of the Convention imposes an obligation on a State, when human lives have been lost in circumstances potentially engaging the responsibility of the State, to ensure by all means at its disposal an adequate response, such as, *inter alia*, a judicial one, so that the legislative and administrative framework set up to protect the right to life is properly implemented and that any breaches of that right are suppressed and punished.

In this regard the Court observed that, if the infringement of the right to life or to physical integrity is not caused intentionally, the positive obligation to set up an efficient judicial system does not necessarily entail that criminal proceedings have to be brought in every case and may be satisfied if civil, administrative or even disciplinary remedies were at the disposal of victims. The Court also emphasized that in cases such as this, individuals must have an access to impartial proceedings.[118]

Special mention must be made of the *Taskin* case which confirms the right to appeal of people against any decision, act or omission 'where they

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[118] *Ibid.*, at paras 128–45.

consider that their interests or their comments have not been give sufficient weight in the decision-making process'.[119] Boyle observes that this reflects the requirements of the Aarhus Convention (Article 9) and Principle 10 of the 1992 Rio Declaration.

IV. CONCLUSIONS

Over a period of several years the ECtHR has developed an impressive jurisprudence concerning cases with a certain environmental element. The relevant Articles which were the legal ground for bringing the cases were mostly Articles 8 and 2. The Court made several very important statements as to the applicability of these Articles in environmental matters, as well as obligations of the States Parties to the Convention deriving from these Articles in cases with environmental concerns.

The following conclusions may be drawn from the relevant case law of the ECtHR regarding environmental claims:

(i) There is no 'environmental' human right in the catalogue of human rights protected by the Convention, and Article 8 may be invoked only when the individual is directly and seriously affected by noise or other pollution;
(ii) Environmental considerations are only one of the elements taken into account while balancing the interests of the individual against those of the community in order to strike a fair balance, and there is no special status of environmental human rights;
(iii) Democratically elected national authorities are best placed to balance the variety of competing interests and factors that may arise in relation to Article 8;
(iv) The State enjoys a wide margin of appreciation in such cases;
(v) The ECHR has in principle a subsidiary role;
(vi) The Court plays only a supervisory subsidiary role;
(vii) Proof of interference by a State is not necessary as the State has a 'positive duty' to safeguard the rights under Article 8;
(viii) State responsibility in environmental cases may arise from a failure to regulate private industry; and
(ix) Compliance with national laws by a State is one of the important elements taken into account while applying a balancing of interests test.

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[119] *Taskin v. Turkey, supra* note 39, at 119.

In order to raise an issue under Article 8 specific conditions must be fulfilled:

(i) the interference must directly affect the applicant's home, family or private life; and
(ii) the adverse effects of environmental pollution must attain a certain minimum level if they are to fall within the scope of Article 8. The Court further clarified that the assessment of that minimum is not general but relative, i.e. it depends on all the circumstances of the case (such as the intensity and duration of the nuisance, its physical or mental effects). The general environmental context should also be taken into account (for example, there would be no claim under Article 8 if the harm complained of was negligible in comparison to the environmental hazards inherent in life in every modern city).

As to Article 2 of the ECHR applicable in cases with environmental element the following findings are relevant:

(i) States are to take appropriate measures (legal and administrative) to safeguard the lives of those within their jurisdiction;
(ii) The State has a duty to promulgate a legislative and administrative framework designed to provide effective deterrence against the threats to life;
(iii) In cases like this, Article 2 can be treated like Article 8 (duty to protect private life and home); and
(iv) States have an extensive margin of appreciation.

Boyle poses the question whether such a right to a clean (healthy) environment should be created. He is of the view that such a right would be less anthropocentric than the contemporary law. It would overcome the drawback of the present situation that environmental claims can only affect one individual whereas such a right would benefit society as a whole and enable NGOs to challenge environmentally detrimental behaviour on public interest grounds. However, Boyle is at the same time aware of the unavoidable definitional problems in postulating environmental rights in 'any qualitative terms'.[120] There are positive consequences of looking at the environmental issues through other human rights, such as the right to life; the right to enjoyment of property; and private life. It brings attention to the most important matters: the detriment to internationally protected

[120] Boyle, *supra* note 38, at 507.

values from unsustainable environmental harm.[121] According to Boyle this is an approach which does not require the defining of such notions as satisfactory or decent environment, and falls within the competence of the human rights courts and does not conflict with environmental institutions or the Conferences of the Parties of environmental treaties. Such a right to a clean environment would also be different for the developed and developing countries. There is no fully satisfactory solution regarding a substantive environmental right. Therefore, Boyle advocates the approach that it is in the particular interest of a society to determine what constitutes sustainable development and acceptable environment. The crux of the matter is to ensure the right process for this determination, at national and international levels, rather than to define the substantive content of such a right.[122] It may be said as well that the approach of the ECHR to environmental matters although impressive, is still rather of piecemeal than consistent character.

[121] One of the most interesting cases concerning the right to the environment was *Affaire Tătar v Roumanie*, Judgment of 27 January 2009 (request no. 670221/01). In this case, the Court found the State violated Article 8 of the ECHR by breaching the duty of care and failed to put in place relevant legislation. The Court as well observed non-compliance by the State with the precautionary principle and the rights with the right to information and the participatory right under the Aarhus Convention, to which Rumania is a party.

[122] Boyle, *supra* note 8, at 504–511.

5. Conclusions

It is not easy to draw general conclusions on a book which consists of essays on various subjects. However, the main idea of the book was to show how many concepts are taken for granted, such as the precautionary principle or the concept of sustainable development, which are in fact still evolving and cause controversy and very heated discussions between scholars and between States. Therefore, many views which purport to be definitive answers to contemporary issues express only one view on the problem. However, these controversies have to be viewed as a positive development of international environmental law, which is not static but in a constant state of flux. It is not just State practice which is constantly evolving, but the jurisprudence of international courts and tribunals which clarifies and crystallizes the concepts of international environmental law, at the general background of international law, such as the *Biotech products* case before the WTO, which made certain statements on the precautionary principle and the 2006 Order of the ICJ in the *Pulp Mills case (Argentina v. Uruguay*), which made pronouncements on the concept of sustainable development. Mention must also be made of human rights courts, such as the ECtHR, the case law of which made a very important contribution to the understanding of the connection between human rights and the environment and the concept of the so-called right to a clean (decent) environment. International environmental law also influenced the development of general international law. Several topics undertaken by the International Law Commission, such as International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law; Prevention of Transboundary Damage from Hazardous Activities; Shared Natural Resources, are related to international environmental law. The decisions of international courts and tribunals, frequently through deciding cases with environmental elements, develop other areas of international law. An example of this was the 1997 *Gabčikovo-Nagymaros (Hungary v. Slovakia)* case, which crystallized certain issues of State responsibility and the law of treaties through the consideration of the issues of international environmental law.

The above observations on the role of international courts and tribunals in the development of international environmental law strengthen the view that international environmental law is part and parcel of and plays a significant role in the development of international law.

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