FRESHWATERS - SEA INTERFACE: EMERGING INTERNATIONAL LEGAL FIELD? *

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I. THE PROBLEM

1. The environmental emergency

It is today well-known that the sea – source of life – is ailing and may not escape death [1]. Mankind is fully aware that the sea is an extremely fragile reality and that its balance and health are threatened. Indeed, the sea is living a crisis situation. It is not necessary to consider all the current literature on the society of risk [2] or the philosophical and political "green" thinking in its multifarious ex-

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1 See the diagnosis of the "Shift in Basic Condition of the Oceans" made by the Independent World Commission on the Oceans in its Report: *The Ocean, Our Future*, Cambridge, 1998, pp. 26-29.

2 *E.g.*Ulrich Beck, *Politik in der Risikogesellschaft*, 1991 or, by the same Author, *Risk Society: Towards a New Modernity*, London, 1992, Sage and S. Lash, B. Szerszynski and B. Wynne (eds.), *Risk, Environment and Modernity. Towards a New Ecology*, London, 1996, Sage.

pressions[3] to grasp the dimension of this problem. The various disasters that the oceans have experienced or are insidiously living at the present time blatantly reveal that the problem and its solution are not simple. The battle for the protection of the sea should not be regarded with pious optimism.

Some of this concern results from the perception that the threat is complex and multifunctional. Indeed, whoever may think that it is restricted to the sea risks committing a dangerous error. In spite of the fact that the spectacular quality of the numerous accidents with the big tankers[4], unfortunately so frequent in the last years, has undeniably contributed to the diversion of our attention and means, these incidents do not, in fact, constitute the principal reason of apprehension from the viewpoint of the health and ecological balance of the sea. It may suffice to recognize that about three quarters of the pollution affecting the sea is land-based[5]. The problem acquires particular importance and visibility in the coastal zones. These areas are where human communities tend to be more concentrated [6,7] and where the pressures placed upon the sea become progressively unbearable[8]. These sparse observations merely underline the seriousness

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3 See Hans Jonas, *Das Prinzip Verantwortung. Versuch einer Ethik für die technologische Zivilisation*, Frankfurt am Main, 1979; A. Gillespie, *International Environmental Law, Policy and Ethics*, 1997 and A. Dobson, *The Green Reader*, London, 1991 or, by the same Author, *Pensamiento politico verde: una nueva ideologia para el siglo XXI*, Barcelona, 1997.

4 For a list of these oil spills, see http://oils.gpa.unep.org/facts/oilspills.htm . One may also just recall the Prestige accident off the coast of Galicia (Spain) and Portugal in November 2002.

5 Independent World Commission on the Oceans, *The Ocean, Our Future*, Cambridge, 1998, p.27. For Europe, see European Environment Agency, *Europe's Environment: The Third Assessment*, Copenhagen, 2003, especially pp. 165-198 as well as European Environment Agency, *Environmental signals 2002. Benchmarking the millenium*, Copenhagen, 2002, chapter 11, pp. 86-99.

6 To provide just an idea through the indication of some figures, it may suffice to remember that the average population density of the United States' coastal counties is five times bigger than non-coastal counties and that no one in New Zealand, Japan or the United Kingdom lives more than two hours travel from the sea. See OECD, *Coastal Zone Management. Integrated Policies*, Paris, 1993, p.19. Additionally, it may equally be noticed that at present about one billion people worldwide are living in coastal urban centres.

7 This is also true of marine living resources, 90 percent of which spend critical part of their lifecycle near coastal waters, as is rightly recalled by André Nollkaemper, "Balancing the Protection of Marine Ecosystems with Economic Benefits from Land-Based Activities. The Quest for International Legal Barriers", *ODIL*, 1996, vol. 27, p. 154. One may also refer to article 194, paragraph 1.

8 The palette of these pressures (corresponding to human activities whose adverse effects these areas have trouble to assimilate) is also very diverse, ranging, for instance, from urban encroachment resulting from an increased urbanisation and population growth, pollution of estuarine and coastal waters, eutrophication, nature conservation impacts, degradation of dunes, loss of critical habitats like coral reefs, wetlands, lagoons and mangrove forests and loss of biodi-

of a worrisome trend of environmental degradation and pinpoint the need to address it specifically and not as both the Law of Freshwaters and the Law of the Sea traditionally do, as a sort of marginal or peripheral problem [9]. Indeed, if one seriously desires to invert this tendency, the natural interactions between the sea and land, particularly the waterways and other bodies of freshwaters which are inscribed in the land, must be considered and possibly even autonomously addressed in a specific international legal field.

2. The difficulty of the Law

The difficulty of the Law, in general, and international law, in particular, with regard to such realities is that it is traditionally immune to ecological criteria [10] and even more so to their holistic and integrated consideration. Indeed, international law is traditionally dependent of an international society, composed of States which are proud and jealous of their sovereignty. It rather appears as an instrument of response to their concerns and wills, which cannot be presumed to be identical to reality itself. But if this is traditionally the image that international law projects, it is no less true that the picture must (presently) be revised. If Humankind wants to save "*spaceship Earth*" [11] and its sea, in particular, one must (begin to) pay greater attention to reality. This is what so many epistemic communities [12] ask for and a message which has also progressively permeated

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versity, land use and landscape deterioration, rarefaction of shorelines, erosion, to hazards of different kinds.

9 It may be deemed telling that the question is rarely considered in seminal works in each of these fields of Law.

10 See Joseph Dellapenna, "Foreword: bringing the customary international law of transboundary waters into the era of ecology", *IJGEI*, 2001, vol. 1, ns. 3/4, pp. 243-249.

11 The concept is due to Boulding. He thereby wants to stress that the Earth as a closed economy is not without unlimited reserves and Man must thus find the correct place for not harming the ecological system. See Kenneth Boulding, "The Economics of the Coming Spaceship Earth", *in* Jarrett (ed.), *Environmental Quality in a Growing Economy*, Baltimore, 1966, pp. 3-14. Other comparable concepts with some impact in raising awareness for the need to provide answers to the founded concerns regarding the whole biosphere are the ones of "*Gaia*" (James Lovelock, *The Ages of Gaia – A Biography of Our Living Earth*, Oxford, 1995) and "*Aniara*" (Harry Martinson, *Aniara*, 1956).

12 *I.e.*, professional advocacy groups sharing common beliefs and expectations. On this, see in special Peter M. Haas, "Do Regimes Matter? Epistemic Communities and Mediterranean Pollution Control", *International Organization*, 1989, vol. 43, pp. 377-403 and, by the same Author, "Introduction: Epistemic Communities and International Policy Coordination", *International Organization*, 1992, vol. 46, pp. 1-35.

the juridical doctrinal discourse [13]. However, the difficulty lies in that this seems to involve a paradigm shift [14] or a profound mutation in the human models of conducting life [15]. To efficiently fight this battle, a rupture with deeply entrenched customs and ideas (from a euphoric '*homo faber*' to a humble Man in healthy "socialization" with a Nature of which it now recognizes itself to be an element, from a technological paradigm to one obeying the primacy of biological truth and of respect for the ecological balances) is, in fact, necessary. The difficulty is aggravated because this seems to place the central place and role of the State [16] – traditional creator of this law and its more direct addressee – in question. Therefore, the principal question becomes that of whether Law is meeting this challenge.

3. Reason of order (or: acknowledgement of limitations)

In order to answer this question, it is first imperative to define, even if in a summary fashion, how Law pre-determined the present location of a question which was previously non-existent. Only subsequent to this will it be possible to evaluate how this concern has lately impinged upon what we submit to be a (possibly) emerging international law of the relationship between the rivers and the sea or, in other words, the law of the freshwaters-sea interface. For reasons

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13 See, paradigmatically, Jutta Brunnée and Stephen Toope, especially, "Environmental Security and Freshwater Resources: a Case for International Ecosystem Law", *Yearbook of International Environmental Law*, 1994, vol. 5, pp. 41, ff. and "Environmental Security and Freshwater Resources: Ecosystem Regime Building", *AJIL*, 1997, vol. 91, pp. 26-59, as well as André Nollkaemper, *The Legal Regime for Transboundary Water Pollution: Between Discretion and Constraint*, Dordrecht, 1993.

14 In the sense awarded by Thomas Kuhn, *The Structure of Scientific Revolutions*, Chicago, 1969, University of Chicago Press.

15 Rightly pointing thereto, see Ellen Hey, "Sustainable Use of Shared Water Resources: The Need for a Paradigmatic Shift in International Watercourses Law", *in* G.H. Blake, W.J. Hildesley, M.A. Pratt, R.J. Ridley, C.H. Chofield (eds.), *The Peaceful Management of Transboundary Resources*, 1995, pp. 127-152.

16 On this issue, in general, see Joseph Camilleri and Jim Falk, *The End of Sovereignty. The Politics of a Shrinking and Fragmented World*, 1992; Ruth Lapidoth, "Sovereignty in Transition", *JIA*, 1992, vol. 45, pp. 330-331; Ken Conca, "Rethinking the Ecology-Sovereignty Debate", *Millenium*, 1994, pp. 1-11; Ronnie D. Lipschutz, "The Nature of sovereignty and the sovereignty of nature", *in* K. T. Liftin (ed.), *The Greening of Sovereignty in World Politics*, Cambridge, Massachussets, 1998, pp. 109-138; Layla A. Hughes, "Foreword: The Role of International Environmental Law in the Changing Structure of International Law", *The Georgetown International Environmental Law Review*, 1998, vol. 10, n. 2, pp. 251-253.

of efficiency and of the natural dimension of this essay, we will concentrate on only one of the vectors of this relationship, the vector river-sea (*i.e.*, the problems posed to the sea by less healthy rivers). This means that we basically will not consider the other dimension of this relationship – the vector sea-river (*i.e.*, the problems the sea brings to rivers' health) –, even if we recognize that this involves clear artificiality. We shall do this in close dialogue with those recent international documents centered on the rivers which were all concluded roughly during the last ten years and over the transition of the century [17], at the global [18], regional (especially Europe [19], but with allusions to other regions

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17 We shall consider particularly, apart from documents whose (binding) juridical value may be discussed, such as the 1992 Dublin Statement on Water and Sustainable Development; the Rio Declaration; Agenda 21; the decision of the Commission on Sustainable Development on the Sustainable management of freshwater (New York, 1998), the Programme for the Further Implementation of Agenda 21 (A/RES/5-19/2); Resolution 55/2, United Nations Millenium Declaration adopted by the General Assembly of the United Nations on 8 September 2000; the Johannesburg Declaration on Sustainable Development; the Plan of Implementation of the World Summit on Sustainable Development of 2002, a significant list of *conventions*. These later ones may then be grouped according to the level at which they were adopted: global, regional or sub-regional. We shall equally look at the special legal context of the European Union Law.

18 At this *global level*, we shall mainly look at the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses, adopted in New York in May 1997 (hereafter, Watercourses Convention) as well as the Stockholm Convention on Persistent Organic Pollutants, adopted in 2001.

19 At the *regional level* of *Europe* (or Europe mainly: indeed UNECE's membership, it should be recalled, is not European only), upon which we shall concentrate our attention or normative analysis, the United Nations Convention on the Protection and Use of Transboundary Watercourses and International Lakes, signed in Helsinki in March 1992 and which entered into force in 1996 (hereafter, Helsinki Convention); United Nations Convention on Environmental Impact Assessment in a Transboundary Context, signed in Espoo in February 1991 and which came into force in 1997 (hereafter, Espoo Convention); its proposed Protocol on Strategic Environmental Assessment; the Helsinki Convention on the Transboundary Effects of Industrial Accidents (hereafter, Industrial Accidents Convention), adopted in 1992 and which entered into force in 2000; the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, signed in Aarhus in 1998, in force since April 2000(hereafter, Aarhus Convention), the 1998 Protocol on Persistent Organic Pollutants to the 1979 UNECE Convention on Long-Range Transboundary Air Pollution; the Protocol on Water and Health to the Helsinki Convention, signed in London in June 1999; the Protocol on Civil Liability and Compensation for Damages Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters to the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the UNECE Convention on the Transboundary Effects of Industrial Accidents, adopted in Kiev in May 2003.

as well [20]) and local or sub-regional level (in the European context [21], in the Asian one [22]) as well as a special international legal system characterised by the integration endeavors of its Member States, the one of European Union or Community Law [23]. The quantity of these legal documents as well as their quality (especially the significant fact that they cover the global, regional, sub-regional and local levels) are indicative of an important and undeniable body of law which is under an impressive process of fast change, as can be assessed simply by considering the limited time frame in which these documents were elaborated. Due to the impossibility as well as the inappropriateness of trying to do an exhaustive scrutiny of these principal legal documents, we will only try to identify some of the most important trends that can be discerned. In this way, this examination will be more analytical than descriptive and primarily concentrated on determining the direction to which they point.

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20 Outside Europe, the main object of our attention shall be the legal developments in *Africa*, and in particular the Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System, signed in May 1987 (hereafter, the Zambezi Agreement); the Protocol on Shared Watercourse Systems in the Southern African Development Community Region (hereafter, SADC Protocol), signed in Johannesburg in August 1995; as well as the Revised Protocol on Shared Watercourses in the Southern African Development Community (SADC), signed in Windhoek in August 2000 (hereafter, the Revised Protocol).

21 At the *sub-regional local level*, in *Europe*, we shall pay attention to the Convention on Cooperation for the Protection and Sustainable Use of the Danube River, signed June 1994 (hereafter, Danube Convention); Agreement on the Protection of the Meuse, signed April 1994 (hereafter Meuse Agreement); Agreement on the Protection of the Scheldt, signed April 1994 (hereafter Scheldt Agreement); Convention on the International Commission for the Protection of the Oder Against Pollution, signed April 1996 (hereafter, Oder Convention); the Convention on the Protection of the Rhine, signed in January 1998 (hereafter, Rhine Convention); the Convention on the Cooperation for the Protection and Sustainable Utilization of the Waters of the Luso-Spanish Hydrographic Basins, signed December 1998 (hereafter, the 1998 Luso-Spanish Convention); the Framework Agreement on the Sava River Basin, signed December 2002 (hereafter, Sava Agreement).

22 At the *sub-regional local level*, in *Asia*, we shall look at the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, signed April 1995 (hereafter, Mekong Agreement); the Agreement between the Government of the People's Republic of China and the Government of Mongolia on the Protection and Utilization of Transboundary Waters, signed April 1995 (hereafter, China-Mongolia Agreement) and the Treaty between the Government of the People's Republic of Bangladesh and the Government of the Republic of India on Sharing of the Ganges Waters at Farakka, signed December 1996 (hereafter, Ganges Treaty).

23 In the special context of *European Union law* or *Community law* we shall make repeated reference to Directive 2000/60/EC of the European Parliament and of the Council, of 23 October 2000, the Directive Establishing a Framework for Community Action in the Field of Water Policy (commonly known as the Water Framework-Directive).

However, it must be stressed that the progress in the normative History on this '*problematique*' is far from being even sketched in its main components with this essay. On the contrary, we are fully aware that it would also be of fundamental importance to look at this progress within the context of the other developments in the legal treatment of the broader sea-land relationship (one may think, for instance, of the Global Program of Action for the Protection of the Marine Environment from Land-Based Activities adopted in Washington in 1995 [24], to mention but one decisive document which is set aside by the choice of almost restricting our analysis to the vector freshwaters-sea), of the relationship sea-sea (especially the way that the global and regional regimes are (or are not) articulated – a subject rendered more pressing in Europe after the notable developments of OSPAR recorded in the Sintra meeting decisions and corresponding statement [25]) and of the relationship sea-air (one may refer to the so-called POPs Protocol, *i.e.* the Protocol on Persistent Organic Pollutants [26] which complements the UNECE Convention on Long-Range Transboundary Air Pollution, adopted in Geneva on 13 November 1979) or even the relation between the general and special regimes (a question of actuality, in Europe, after the adoption in Aarhus, in June 1998, of the POPs Protocol, once again, and worldwide, after the adoption in 2001 of the Stockholm Convention). The very marginal and incidental references we may make to these questions are merely a reflection of our desire to situate or illustrate some of the meanings which may be attributed to this normative effervescence as well as to the limitations that, in spite of this one, are herewith hidden.

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24 As well as the then equally adopted Declaration of Washington. See http://www.gpa.unep.org.

25 See http://www.ospar.org/eng/html/md/sintra.htm .

26 The aim of the Protocol is to control, reduce or eliminate discharges, emissions and losses of persistent organic pollutants that cause or may cause significant adverse effects on human health or the environment (-these highly toxic chemicals are indeed deemed responsible for killing and injuring people and wildlife by inducing cancer and damaging the nervous, reproductive and immune systems) as a result of their long-range transboundary transport.

II. The "traditional" law

The traditional law pertaining to this issue is of an almost disarming simplicity. It involves a most notorious disparity between the sea and the rivers (and more generally the land to which these belong).

On the one hand, one had the sea which was subject to a principle of freedom of use only derogated in the case of maritime internal and territorial waters close to the land and under its influence of power ('*terrae potestas finitur ubi finitur armorum uis*', as Bynkershoek justly proclaimed [27]).

On the other side of the equation (the rivers and the land in which they were inscribed), the golden rule was that of sovereignty: international law thereby recognized the power of the State and with it, a kind of modern version of the Roman '*ius utendi, fruendi et abutendi*' [28] that ultimately goes with that concept, after whose acknowledgement it would humbly enter into (a state of) total normative "black-out".

This means that international law did not, in the end, establish any rules whatsoever regarding a missing and indeed non-existent river-sea relationship.

This basic picture of separation remained in spite of the evolutions of the last decades. In fact, until the beginning of the nineties, the tradition of radical segmentation of the waters (salted waters or freshwaters) remained [29]. In this way, one had the law of the sea or the law of salt waters, on the one hand and the law of watercourses also known as the law of freshwaters on the other hand. Although one could point to some progress in the normative content of each of these laws [30 / 31], it is doubtful that this was sufficient to solve the problems al-

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27 See his *De dominio maris dissertatio*, 1702.

28 Equally equating sovereignty with Roman maxims of private property law, see August Wilhelm Heffter, *Das Europäische Völkerrecht der Gegenwart*, Berlin, 1873, p. 58, Jonas Ebbeson, *Compatibility of International and National Environmental Law*, London, 1996, pp. 11-12.

29 See the expression of this in such reference international environmental law manuals as the ones by Philippe Sands, *Principles of International Environmental Law*, Vol.I, Manchester, 1995 (chapters 8 – Oceans and Seas- and 9 -Freshwater Resources) and by Patricia Birnie and Alan Boyle, *International Law and the Environment*, Oxford, 1992 (chapters 6 -Pollution of International Watercourses- and 7 -The Law of the Sea and the Regulation of Marine Pollution).

30 Several Authors have been trying to represent, influence and capture this evolution. Amongst the most interesting works in the realm of studies dedicated to the latter legal field (law of freshwaters), see André Nollkaemper, *The Legal Regime for Transboundary Water Pollution: Between Discretion and Constraint*, Dordrecht, 1993; Jutta Brunnée and Stephen Toope, "Environmental Security and Freshwater Resources: Ecosystem Regime Building", *AJIL*, 1997, vol. 91, pp. 26-59 as well as "Freshwater Regimes: The Mandate of the International Joint Commission", *Arizona Journal of International and Comparative Law*, 1998, vol. 15, pp.

ready identified in general terms. One may even think that this progress is primarily on the side where it matters least (the Law of the Sea) or may have less efficient results and, in any case, does not have enough juridical density. Indeed, the normative "tiger" relating to this matter, if it exists at all, is certainly harmless for lack of teeth or vigor. In fact, the few rules of the 1982 Law of the Sea Convention on the protection and preservation of the marine environment which

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273, ff.; Malgosia Fitzmaurice, "Convention on the Law of Non-Navigational Uses of International Watercourses", *LJIL*, 1997, vol. 10, pp. 501, ff.; Ellen Hey, "The International Watercourses Convention: to What Extent Does It Provide a Basis for Regulating the Uses of International Watercourses?", Paper, 1997 (on file with the author); Lucius Caflisch, "La Convention du 21 mai 1997 sur l'utilisation des cours d'eau internationaux à des fins autres que la navigation", *AFDI*, 1997, vol. XLIII, pp. 663, ss; Patricia Wouters, "The Legal Response to International Water Scarcity and Water Conflicts: The UN Watercourses Convention and Beyond", *GYBIL*, 1999, vol. 42, pp.293-336; Markus Reimann, *Die nicht-navigatorische Nutzung internationaler Süsswasserressourcen im Völkerrecht*, Frankfurt am Main, 1999; Joseph Dellapenna, "The Customary International Law of Internationally Shared Freshwaters", *in* Luso-American Foundation, *Shared Water Systems and Transboundary Issues with Special Emphasis on the Iberian Peninsula,* Lisbon, 2000, pp. 79-148; Stephen McCaffrey, *The Law of International Watercourses: Non-Navigational Uses*, Oxford, 2001; Attila Tanzi and Maurizio Arcari, *The United Nations Convention on the Law of International Watercourses*, London, 2001. Additionally, permit us to refer to our own works Paulo Canelas de Castro, "O Regime Jurídico das Utilizações dos Cursos de Água Internacionais no Projecto da Comissão de Direito Internacional", *Revista Jurídica do Urbanismo e do Ambiente*, 1996, nºs 5/6, pp. 141-199; "Para que os rios unam: um projecto de Convenção sobre a cooperação para a protecção e a utilização equilibrada e duradoura dos cursos de água luso-espanhóis", *in* UAL, *Conferência Portugal-Espanha*, Lisbon, 1997, pp.56-60; "The Judgment in the *Case Concerning the Gabcikovo-Nagymaros Project*: Positive Signs for the Evolution of International Water Law", *YBIEL*, vol. 8, 1997, pp. 21-31; "Novos Rumos do Direito Comunitário da Água: a caminho de uma revolução (tranquila)?, "*Revista do Centro de Estudos de Direito do Ordenamento, do Urbanismo e do Ambiente*, 1998, I, nº 1, pp. 11-36; "The Future of International Water Law", *in* Luso-American Foundation, *Shared Water Systems and Transboundary Issues with Special Emphasis on the Iberian Peninsula,* Lisbon, 2000, pp. 149-216; "Do *Mare Liberum* ao *Mare Commune*? – as viçosas mutações do Direito Internacional do Mar", *Revista Jurídica da Associação Académica da Faculdade de Direito de Lisboa*, 2001, nº 24, pp. 11-24; "Prospects for the Future of International Water Law: The View Projected by the Epistemic Community", *in* The Permanent Court of Arbitration/ Peace Palace Papers, *Resolution of International Water Disputes*, The Hague, 2003, pp. 371-416; "The Issue of Transboundary Rivers in Southern Africa: Heading for Fratricidal Water Wars or Towards Cooperation in the Protection and Sustainable Utilization of International Waters?", *in* Luso-American Foundation, *Implementing Transboundary River Conventions with emphasis on the Portuguese-Spanish Case: Challenges and Opportunities*, Proceedings of the Conference held in Porto, Portugal, on March 8 and 9, 2001, 2003, pp. 204-248; "New Era in Luso-Spanish Relations in the Management of Shared Basins?- The Challenge of Sustainability", *in* Malgosia Fitzmaurice and Milena Szuniewicz (eds.), *Exploitation of Natural Resources in the 21st Century*, The

are of relevance to this particular issue (Part XII, '*notius*' article 207 [32]) are tantamount to an appeal only to the coastal states, a call for them often only to endeavor to take measures against land-based pollution. Still bending to the logic of sovereignty which classically emanates from the land [33], these rules of the law of the sea may already translate a welcome common concern [34] for and even a (nominal) apprehension of the problem. But they certainly do not establish the means for the eradication of the problem.

Further, from the side of the law of international watercourses, there is no obvious or specific answer to the appeal at all. Not that this Law, as a whole, has not evolved. Far from it. There is even very significant progress; for example in the fact that the hyperbolic visions of sovereignty, be they the one exemplarily

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Hague, 2003, pp. 191-234; "A legal regime on cooperation for the protection and sustainable use of the Luso-Spanish river basins: Looking ahead", Paper presented to the Congress *Sustainable Development of International Basins*, promoted by NATO's Scientific Committee and held in Moscow in 1997, *forthcoming*.

31 For the former law (the law of the sea), permit us to refer to Paulo Canelas de Castro, "Do *Mare Liberum* ao *Mare Commune*? – as viçosas mutações do Direito Internacional do Mar", *Revista Jurídica da Associação Académica da Faculdade de Direito de Lisboa*, 2001, nº 24, pp. 11-24, further developed *in* Paulo Canelas de Castro, "Do '*Mare Clausum*' ao '*Mare Commune*'? Em busca do fio de Ariadne através de cinco séculos de regulação jurídica do Mar", *forthcoming*.

32 The article under the caption "Pollution from land-based sources", is, symptomatically, mainly formulated in an aspirational form. See criticism by André Nollkaemper, "Balancing the Protection of Marine Ecosystems with Economic Benefits from Land-Based Activities. The Quest for International Legal Barriers", *ODIL*, 1996, vol. 27, p. 154.

33 In this sense, R.-J. Dupuy, *The Law of the Sea: Current Problems*, Dobbs Ferry, 1974, p.14.

34 The concept, introduced by the Permanent Court of International Justice in the case concerning the territorial jurisdiction of the International Commission of the River Oder (*Case Relating to the Territorial Jurisdiction of the International Commission of the River Oder (U.K., Czech Republic, Denmark, France, Germany and Sweden v. Poland), 1929, PCIJ (ser. A)*, N. 23, (10 Sept.), p. 27), has since elicited doctrinal energy, especially in the environmental law context, one of the most important expressions of which is still Jutta Brunnée's "Common Interest – Echoes from an Empty Shell? Some Thoughts on Common Interest and International Environmental Law", *ZaoRV*, 1989, vol. 49, pp. 791-808. For a discussion of the *theory of community of interests* in the field of international watercourses law, based on the assumption that States sharing an international river form a sort of legal community obliging the parties jointly to use and manage the common resource on the basis of a sort of community property theory or condominium, adjusted to the use of the waters of those watercourses, see, among others, F.J.Berber, *Rivers in International Law*, 1959, pp. 22-25; J. Barberis, *Los recursos naturales compartidos entre Estados y el derecho internacional*, 1979, pp. 21-23; J. Lipper, "Equitable Uilisation", *in* A. H. Garretson *et al.* (eds.), *The Law of International Drainage Basins*, 1967, pp. 38-40 ; L. Caflisch, "Règles générales du droit des cours d'eau internationaux", *RCADI*, 1989, vol. VII, t. 219, pp. 59-61

formulated in the Harmon doctrine [35] or the other equally unilateral visions which traditionally inspired the sector – the doctrines of territorial sovereignty and of territorial integrity [36] – seem definitively surpassed, thus evidencing a logic of at least some solidarity, exemplary present in the principle of reasonable and equitable utilization [37]. Moreover, it is certainly also meritorious that this law pays increasing attention to the social-economic dimension of the freshwaters' problem. As such, it now operates a welcome dislocation from its more traditional focus on the questions of domain and title to the questions of use of resources [38]. However, all things considered and certainly having in mind all the progress which characterized the sixties, seventies and even eighties, progresses which are well depicted in the emergence of different notions such as the ones of shared natural resources [39] and even the one of community of interests [40] – whose scope is however limited, due to its almost exclusive doctrinal or jurisprudential nature –, this law continues to be a mere law of composition of the (private) interests of the States. From the point of view of the substance of its solutions and of its subjects (be they active or passive), this law remained a law of neighbor(hood)s and had a content which therefore was mainly procedural. Moreover, the typical hypothesis it has in mind is a conflictive one; this traditional law was a confrontational law. This explains why its norms are predominantly equivalent to vague reciprocal abstentions, furthermore usually related to a very restricted geographic

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35 See its description and assessment by J. Lammers, *Pollution of International Watercourses*, 1984, pp. 267-270 and 361; Allen L. Springer, *The International Law of Pollution*, Westport, 1983, p. 67 and S. McCaffrey, "The Harmon Doctrine One Hundred Years Later: Buried, Not Praised", *Natural Resources Journal*, 1996, vol. 36, pp. 549, ff..

36 J. Lammers, *Pollution of International Watercourses*, 1984, p. 216 and B.A. Godana, *Africa's Shared Water Resources*, London, 1985, p. 32.

37 Charles Bourne has devoted his intellectual energies and rigour to demonstrate this balanced character, in several instances, such as "The Right to Utilize the Waters of International Rivers", *Canadian Yearbook of International Law*, 1965, pp. 187-264; "*The Case Concerning the Gabcikovo-Nagymaros Project*: An Important Milestone in International Water Law", *YBIEL*, vol. 8, 1997, pp. 6-12; "The International Law Association's Contribution to International Water Resources Law", *in* Slavko Bogdanovic (ed.), *International Law Association Rules on International Water Resources*, Novi Sad, 1999, pp. 3-71; "Conflicting Views on the Basic Principles of International Water Law", *in* Slavko Bogdanovic (ed.), *Legal Aspects of Sustainable Water Resources Management*, Novi Sad, 2002, pp. 9, ff..

38 On this subject, with examples from the Luso-Spanish context, see Paulo Canelas de Castro, "Para que os rios unam: um projecto de Convenção sobre a cooperação para a protecção e a utilização equilibrada e duradoura dos cursos de água luso-espanhóis", *in* UAL, *Conferência Portugal-Espanha*, Lisbon, 1997, pp. 56-60.

39 Especially promoted by Julio Barberis, in his *Los recursos naturales compartidos entre Estados y el derecho internacional*, 1979.

40 *Case Concerning the International Commission of the River Oder*, *PCIJ Ser.A N.º 23*, p. 27.

scope[41/42]. In sum: this is certainly not a Law designed to solve common problems, related to such public-nature issues as the environmental ones[43]. It would hence be in vain that one would here aspire to find any answer to any "tragedy of the commons" type of dilemma[44].

III. Trends of modern law

The more modern Law of Freshwaters seems however to contrast considerably with this image and start providing an inceptive response to the concern we have in view.

In this movement it undoubtedly owes to the mega-meeting of Rio de Janeiro in which the international environmental concerns seem to have definitely acquired global normative accreditation[45]. Indeed, the nineties in the last century and these current first years of the XXI century, also correspond-

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41 A good example of this kind of Law are the treaties adopted by Portugal and Spain in the XX century, to the exception of the very last one, adopted in 1998. See Paulo Canelas de Castro, "Para que os rios unam: um projecto de Convenção sobre a cooperação para a protecção e a utilização equilibrada e duradoura dos cursos de água luso-espanhóis", *in* UAL, *Conferência Portugal-Espanha*, Lisbon, 1997, pp.56-60 and "New Era in Luso-Spanish Relations in the Management of Shared Basins?- The Challenge of Sustainability", *in* Malgosia Fitzmaurice and Milena Szuniewicz (eds.), *Exploitation of Natural Resources in the 21st Century*, 2003, pp. 191-234.

42 One may equally recall the leading case of International Environmental Law or of the Law of Natural Resources, the 1941 *Trail Smelter Case*, where the polluting Canadian industry was located close to the border of the USA.

43 See Layla A. Hughes, "Foreword: The Role of International Environmental Law in the Changing Structure of International Law", *The Georgetown International Environmental Law Review*, 1998, vol. 10, n. 2, pp. 251-253.

44 We are naturally making reference to the notion by Garrett Hardin, "The Tragedy of the Commons", *Science*, 1968, vol. 162, pp. 1234, ff..

45 Cfr. Peter Malanczuk, "Die Konferenz der Vereinten Nationen über Umwelt und Entwicklung (UNCED) und das internationale Umweltrecht", *in* Beyerlin, Bothe, Hofmann, Petersmann (eds.), *Recht zwishen Umbruch und Bewahrung. Festschrift für* R. Bernhardt, Berlin, 1995, pp. 985, ss.; Maurice Strong, "Beyond Rio: Prospects and Portents", *Colorado Journal of International Environmental Law and Policy*, 1993, vol. 4, pp. 21, ff., *notius* p. 29; Speth, "A Post Rio Compact", *Foreign Policy*, 1992, n. 88, p. 145; Haas, Levy and Parson, "Appraising the Earth Summit: How Should We Judge UNCED's Success?", *Environment*, 1992, n.8, vol. 34, pp. 6-15, 26-36; R.N. Gardner, *Negotiating Survival: Four Priorities after Rio*, 1992, pp. 96, ff.; S.P. Johnson, "Did We Really Save the Earth at Rio?", *EELR*, 1992, vol. 1, pp. 81-85.

ing to the dawn of the new Millenium appear destined to be remembered as a period of intense negotiation and eventually the adoption of conventions or other normative instruments on fresh waterways or freshwaters which bear witness of a fundamentally new outlook. It seems possible to apprehend this innovative orientation of the more modern extra-national law of the freshwaters – be it either as a global or regional international law or as a supranational law – in a double criteria.

On the one hand, the newer freshwaters law tends to be more realistic, in that it shows a genuine effort to integrate and look more attentively at reality, in general, and at the natural interface between freshwaters and the sea, in particular. On the other hand, and although this other orientation may appear conflictive (in spite of the fact that it is indeed due to the same fundamental reason), the newer freshwaters law also becomes a much more demanding law, one which turns it, almost paradoxically, into an idealistic law. This last tendency is particularly true in what concerns the way in which it deals with the society for which it is made. Moreover, this double movement of the more modern freshwaters law would gain in being approached by considering the two main levels at which this movement lets itself be detected: both at the level of the (definition of the) central object of this regime, henceforth closer to reality, more realistic (A) and, in a probably yet more determinant way, at the level of the content of the very international regime (B) which these instruments are thereby helping to shape, a more ambitious or idealistic one. We believe that these advances have significant repercussions for the problem of our particular concern.

A. An object in closer conformity with reality

As for the problem of the (definition of the) object of reference of this law, there seem to be two key angles from which the progress deserves to be assessed: that of the direct relationship river-sea (1) and that of the indirect relationship land-sea (2), a relationship that functions as a sort of condition of the former.

1. THE RELATIONSHIP RIVER-SEA

With respect to the first term of our problem, we may immediately state that international and European Law, be it the specific Law of European Union [46]

[46] See preamble, 17, 27 as well as articles 1, 3, paragraph 1 and 11, paragraph 6 of the Water Framework Directive.

or the more general one [47], definitely recognize the problem of the interface between the rivers and the sea. They equally start responding to the need of establishing this relationship as an important condition of their substantive treatment of the environmental '*problematique*'.

a. *Global level*

Today this is so, it must be stressed, at the global level even. Naturally, this one is always of a more difficult and lengthier conception. This is due to the need to establish a consensus among sometimes very diverse positions. In any event, if one might already deduce the possibility of "covering" hypotheses of the relationship of the river with the sea from the generality of the '*fattispecie*' of many rules and principles enshrined in the Watercourses Convention [48] or of the ample character of the corresponding obligations, the very consideration of article 23 seems to remove any doubt as to the integration in this treaty, nominally dedicated to watercourses, of the special goal of the protection of the marine environment. Hence, if we perform a complete systematic interpretation of this normative message, one which necessarily retroacts over the determination of the exact scope of the two main objectives of the Convention, we shall have to conclude that this legal document aims not only at the protection and the use of international watercourses (in the first case, this aim is expressly affirmed by article 20), but also at the protection of the adjacent marine environment including estuaries. It should also be noted that article 23 is formulated in terms which clearly demonstrate the extent of its normative ambition. Indeed, it prescribes that watercourse states both individually and jointly take (all) measures necessary for attaining the objective of the protection and preservation of the marine environment. This all means that the nominal or apparent object or scope of the Convention is, in the final analysis, broader than the international watercourse, the concept which thus ultimately only functions as the direct pretext of this regime (article 2 (b) and (c)). Indeed, one shall have to conclude that, whereas the international watercourses constitute the central nucleus of the discipline, this later one also has, all implications considered, the marine environment related to the watercourse as (part of) its object. As a matter of fact, we submit that this clarification would also result from an analogous systematic interpretation of the norm corresponding to the general article introducing Part IV of the Convention. By referring to ecosystems, vis-à-vis which an obligation of protection and preservation is established, article 20 of the Watercourses Convention should

47 See articles 2, paragraph 6 and 9, paragraph 3 of the 1992 Helsinki Convention.

48 This is certainly the case of the fundamental principles set out in articles 5 and 7.

also be taken as a powerful normative indication that at least the ecosystemic relations between the rivers and the sea are also to be integrated.

b. *Regional level*

Furthermore, if one may identify this trend to legally integrate the real interface river-sea even at the level of the global Watercourses Convention (a trend ensuing from the proposed operation of systematic interpretation and from the literal recourse to article 23, which thus stands as a reinforcement of the appropriateness of such operation), one shall then have to admit that this tendency should be considered even stronger at the regional level [49]. Indeed, we submit that this is what the direct consideration of the third indent of the Preamble to the UNECE 1992 Helsinki Convention entails.

The same can be said of the key rules of the mentioned Helsinki Convention, such as article 2, paragraph 6 and article 3, paragraphs 1 and 2.

It is also blatantly evident in the main rules of the so-called Water Framework Directive. Its very first article, in particular, does not permit doubts with regard to this issue. Indeed, in determining the objective as well as, simultaneously, the spatial scope of application of the discipline, it refers to the transitional waters and coastal waters. Additionally, the very same provision considers that the measures which are to be set out are to contribute to the protection of the territorial and marine waters. Finally, and this time, we may note, from the viewpoint of its substantive regime, this leading text of European Union or Community Law comprises special rules particularly directed to the protection of marine waters. Such is the case, for instance, of article 11, paragraph 6.

c. *Local level*

Lastly, one may find examples of obligations specifically and expressly directed to ensuring the protection of marine waters at the local international level, as well.

This is the case, for example, of article 2, paragraph 1 of the *Danube* Convention when it enjoins the Contracting Parties to "*endeavor to contribute to reducing the pollution loads of the Black Sea*". Or of article 6 (e) in what concerns the "*littoral ecological conditions*" mentioned.

One may also point to those references to the marine '*problematique*' which are to be read in the Preambles of the Scheldt and Meuse Agreements [50].

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49 For practical reasons we shall limit ourselves to illustrations based on the European example.

50 When they refer to the Convention on the Protection of the Marine Environment of the North-East Atlantic, in the fourth indent of the Preamble.

Similarly, one should point to the desired reduction of pollution from non-point or diffuse sources proclaimed by articles 3, paragraph 2, recital c)), or even, possibly, to the allusion to "*neighboring aquatic systems*" (articles 5, recital m) of both Conventions), albeit these are done in a more implicit or indirect way.

Even clearer, then, is the example of the Oder Convention. Apart from a reference to the desire of reducing in a lasting manner the pollution load of the Baltic Sea, it sets "*prevent[ion] and reduct[ion] (....) of the pollution of the Oder and of the Baltic Sea*" as the first objective presiding over the regime of cooperation which it purports to create. And in article 2, paragraph1, a) it refers to the sea's special conditions as a parameter to be looked at in the process of defining the quality objectives which it commits to the Oder Commission.

Finally, the trend is reinforced by article 14 of the 1998 Luso-Spanish Convention, when it foresees, in its paragraph 2, that "(...) *the Parties shall coordinate the necessary measures to prevent, eliminate, mitigate and control the land-based pollution of estuaries and of their territorial waters and adjacent marine waters* (...)".

2. THE RELATIONSHIP LAND-SEA

There is another title, more "indirect", under which the more recent international law of freshwaters proves to pay a "realistic" attention to the interface of such waters (mainly rivers) with the sea. This is so when it defines not only the river but also the whole hydrographic basin in which the river is just but one element, as the geographic object of its discipline. The usefulness of this wider object is that it gives a conceptual opening or, for that matter, an easier pretext for a list of more intense obligations. And now these also take into account the land activities which ("directly") influence the river and, by this means, ("indirectly") the sea [51]. If this is not the case with the Watercourses Convention – an omission which is to be attributed mainly to many developing States, fearful of the implications of such an option for their sovereignty (and, in particular, upon their autonomy to draw and conduct land use policies [52]) -, it is already so with

51 Theoretically stressing the importance of a wider notion *vis-a-vis* that of watercourse, in name of an efficient environmental management and protection, Lammers, *Pollution of International Watercourses*, 1984, pp. 17-22 and 110-113 as well as Teclaff and Teclaff, "Transboundary Toxic Pollution and the Drainage Basin Concept", *in* Utton and Teclaff (eds.), *Transboundary Resources Law*, 1987, pp. 27, ff.. See, previously, as well, Charles Bourne, "The Development of International Water Resources: The 'Drainage Basin Approach'", *Canadian Bar Review*, 1969, pp. 62-87.

52 See *ILC Yearbook*, 1976, vol. II, Part 1, pp. 152-163 and J. L. Westcoat, "Beyond the River Basin: the Changing Geography of International Water Problems and International Water-

European Union or Community Law (articles 3, 11 and 13 of the Water Framework-Directive, for instance) as well as in the case of several special conventions such as the ones of the Meuse and Scheldt Agreements (articles 1 and 3), of the Danube Convention (article 2, paragraph1), or of some of their obligations, as well as the Convention between the two States sharing the basins of the Iberian Peninsula (article 14 and Annex I, 2) [53].

The parallel movement in the regional law which looks at this issue from the perspective sea-river must be added to these developments. There is, in fact, an emerging trend for those Conventions on the regional seas adopted in the framework of the program on the regional seas of UNEP [54], foremost at the level of the objectives but also of their official designations, to be updated or conceived in a more ample way in order to either include a specific reference to the special objective of the protection of the coastal zones (*e.g.* the Convention for the protection of the Mediterranean Sea against Pollution of 1976, suggestively named, after the 1995 amendments, "Convention for the protection of the marine environment *and of the coastal area* [55] of the Mediterranean" [56]) or to "*related inland waters*" (article 1 of the Convention for Cooperation on the Protection and Development of the Marine and Coastal Environment of the West and Central African Region).

Moreover, in some special cases, the reforming movement went so far as to redefine the very object or geographical scope of the treaty. So much so that sometimes the whole adjacent hydrographic basins are also included. This is so exemplarily in the case of the 1980 Athens Protocol on the Protection of the Mediterranean Sea against Land-Based Pollution as amended in 1996 [57] in Syracuse.

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course Law", *Colorado Journal of International Environmental Law and Policy*, 1992, pp. 301, ff. and Paulo Canelas de Castro, "O Regime Jurídico das Utilizações dos Cursos de Água Internacionais no Projecto da Comissão de Direito Internacional", *Revista Jurídica do Urbanismo e do Ambiente*, 1994, Nºs 5/6, pp. 154-161.

53 And, outside Europe, it can be documented in the Zambeze Agreement (article 1) as well as in the Mekong Agreement (article1).

54 See www.unep.org/regional seas .

55 Naturally, the italics belongs to us.

56 Article 3 foresees the extension of the traditional geographical scope of the Convention to the interior waters and the possibility of each State to extend it still to coastal zones it may wish to define. Furthermore, each Protocol to the Convention may still define in more extensive terms its own scope of application. See B.Vukas, "The protection of the Mediterranean Sea Against Pollution", *in* U.Leanza (ed.), *Il regime giuridico internazionale del mare mediterraneo*, Milano, 1987, pp. 420-421.

57 The *designation* of the Protocol changed to 'Protocol for the Protection of the Mediterranean Sea against the Pollution caused by Land-Based Sources and Activities' and its *geographical scope* extended in order to comprehend the whole hydrographic basin, the littoral salt waters

Or else it establishes obligations which by their content somehow "integrate" the land of the Parties in the object of the regime. This is the case of article 3 of the OSPAR Convention, or Convention for the Protection of the Marine Environment of the North-East Atlantic, which reads: "*The Contracting Parties shall take, individually and jointly, all possible steps to prevent and eliminate pollution from land-based sources in accordance with the provisions of the Convention, in particular as provided for in Annex I.*").

B. A more demanding regime

This conceptual progress, indicative of the closer attention paid to the '*natura rerum*' and to the ecosystemic relations truly intervening within Nature, would, however, be void of significance if such move were not accompanied by a more ambitious normative perspective about what is deemed acceptable or necessary State behaviour.

To assume the complex unity of the ecosystems would indeed be insufficient or even devoid of consequences if, subsequently, the main political entities which have to deal with these ones, the watercourse States, while possibly still pretending to give practical translation to those objectives, would in normative truth be allowed to act in dissonance or merely co-exist, practising different if not clashing policies [58]. It is, on the contrary, imperative that, even if safeguarding important doses of autonomy, the States Parties to these regimes harmonize their juridical solutions and cooperate intimately to this end. This can be done either by a strategy of coordination of their respective actions (as the 1998 Luso-Spanish Convention advocates [59]) or even foreseeing the more far-reaching integration of these actions and policies according to a common and consistent Regional Strategic Action Plan (as seems to already be the promising case in the Southern African Development Community and

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and the underground waters communicating with the sea. The revised list of *sources* and *activities* to which the Convention applies equally deserves attention. See J.J. Ruiz, *Derecho Internacional del Medio Ambiente*, Madrid, 1999, pp. 222-226.

58 On the issue of differentiation in this law, or the 'right' of each (sub-) region to develop its own approach to these issues, see A. Nollkaemper, "Balancing the Protection of Marine Ecosystems with Economic Benefits from Land-Based Activities . The Quest for International Legal Barriers", *ODIL*, 1996, vol. 27, pp. 155, ss..

59 See articles 20 through 23.

the corresponding region [60]) [61]. In any case, and irrespective of the different degrees of intensity, it is of vital importance to find a conceptual-normative and institutional correspondence to the assumption of the physical-natural reality: if not a less probable policies unity, at least a union of objectives in the conducting and implementation of such autonomous policies.

On the other hand, it is equally fundamental that the regime show a normative pluralism parallel to the complexity of the underlying problem, as well as the necessary articulation of the different dimensions of the normative response, thereby also corresponding to the complexity of the questions posed by Nature and to the truth of the interdependency of the problems. This means that a holistic identification and understanding of these problems is crucial. As it also is an equally integrated law treatment of the diverse relevant questions. Both criteria are equivalent to true conditions of the effectiveness of the normative response to the problems involved. A coordination of the managerial actions characterized by the integrated treatment of the various problems is, at the very least, necessary. Only then, we submit, can the rivers abandon their frequent current status as sewage canals or as natural emissaries which significantly contribute to the destruction of the sea. Only then too will the proclaimed community of concerns give way not only to a genuine common assumption of a multifarious reality and a reality shared by different authorities – but also a reality that intrinsically continues to be unitary –, but equally to common patterns of behavior and actions rendered difficult to differentiate precisely by the respect of those operative standards [62].

1. GENERAL OBLIGATION OF COOPERATION

Showing willingness to make this qualitative progress, all the texts that we have been considering place special emphasis on the fundamental idea of

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60 See SADC Water Sector Co-ordination Unit, *Regional Strategic Action Plan for Integrated Water Resources Development and Management in the SADC Countries (19999-2004): Summary Report*, Maseru, June 1998.

61 See also my article "The Issue of Transboundary Rivers in Southern Africa: Heading for Fratricidal Water Wars or Towards Cooperation in the Protection and Sustainable Utilization of International Waters?", *in* Luso-American Foundation, *Implementing Transboundary River Conventions with emphasis on the Portuguese-Spanish Case: Challenges and Opportunities*, Proceedings of the Conference held in Porto, Portugal, on March 8 and 9, 2001, 2003, pp. 204-248 as well as Micaela Alexandre, "Regulamentação da gestão dos cursos de água compartilhados na Região da SADC", Maputo, 2001, *Paper*.

62 Standards such as best available techniques in the industrial sector and best environmental practices in the agricultural one play a most relevant role in such context, as is recognized by the Water Framework Directive in paragraph 2 of article 10.

cooperation of all concerned States to solve the multitude of problems in cause. In the case of the Watercourses Convention, this is even erected in a general obligation (article 8) founding special duties [63].

Moreover, this cooperation is elevated in the Danube Convention to the level of the very object of the Convention. This is also shown by its integration in the designation of the treaty itself [64].

Lastly, the Water Framework Directive also gives special attention to this objective in its introductory article 3.

This desired union of the watercourses States or practical concordance of their actions through cooperation is promoted by various forms or main types. It finds expression, on the one hand, in what may be termed a procedural cooperation, one which concerns the actions to be developed, especially in cases of foreseeable impacts of envisaged or planned measures [65]. These cooperative efforts may also give rise to obligations of logistical cooperation. As well as, many times, an organizational or institutional cooperation is equally foreseen. On the other hand, this desired form of union is also promoted by a substantive or material cooperation.

a. *Procedural cooperation*

One of the principal areas of progress [66] made over the last decades in freshwaters international law is undoubtedly the one resulting from the consecration of procedural duties of cooperation [67]. These duties are guarantees of the

63 The procedural ones are detailed in Part III of the United Nations Convention.

64 The official designation is "Convention *on Cooperation* for the Protection and Sustainable Use of the River Danube"(our emphasis).

65 This particular concern may be understood, since these are critical moments in the development and management of a basin.

66 This is, however, not an absolute novelty, since the older treaty practice, as well as the corresponding custom – the "classical" law in the field –, already comprehended some general obligation of exchange of information and a duty to consult and negotiate. See A . Kiss, "The International Protection of the Environment", *in* R.S.J. MacDonald and D.M. Johnston (eds.), *The Structure and Process of International Law*, 1983, pp. 1081, f., as well as K. Ipsen (ed.), *Völkerrecht*, München, 2004, 5th ed., pp. 985 and 1056-1060.

67 See C. Bourne, "Procedure in the Development of International Drainage Basins: The Duty to Consult and to Negotiate", *Canadian Yearbook of International Law*, 1972, pp. 212-234 as well as, by the same Author, "The International Law Commission's Draft Articles on the Law of International Watercourses: Principles and Planned Measures", *Colorado Journal of Environmental Law and Policy*, 1992, pp. 65-92; F. Francioni, "International Cooperation for the Protection of the Environment: the Procedural Dimension", *in* Lang, Neuhold, Zemanek (eds.), *Environmental Protection and International Law*, 1991, pp. 203, ff.; J. Bruhács, *The Law of Non-Navigational Uses of International Watercourses*, 1993, pp. 172, ff.; and Phoebe N.Okowa, "Procedural Obligations in International Environmental Agreements", *BYBIL*, 1996, vol. 67, pp. 275-336.

promotion or preservation of a constant or regular communication or dialogue among the Parties about the problems which are developing, thus enabling the treatment of these questions at an early stage and not at the one when they already turned into true conflicts. Besides, without these duties the basic obligation of use of the international waters in consideration of the interests of the other watercourse States would be devoid of practical effects. They usually also entail the generalization of the prescribed dialogue to all relevant social actors or stakeholders – beyond the States Parties also International Organizations and individuals, be they organized or not[68 / 69], thus in a full recognition of their interdependency, of the social-political dimension of the environmental reality as well as that the relationships in this domain are or should be polygonal[70], since they concern law subjects of very diverse natures and with very different roles. However, the recognition of the need of their consecration reveals foremost that, as much as its object – the watercourse –, the very management of reality is continuous or regular and dynamic, since the problems or issues which are thereby supposed to be resolved are also in constant evolution, if not transformation. On the other hand, the consecration of these duties is founded in the certitude that in order to meet the challenges posed by reality, it does not suffice to proclaim substantive patterns of behavior, as progressive as they may and ought to be. Rather, special care is also necessary to ensure implementation and compliance, its translation into facts. Moreover, it involves the idea that this is relevant not only in situations of normalcy but also in the face of the new unexpected situations, sometimes dramatic (industrial accidents, pollution incidents) that always arise.

One of the principal developments made by the Watercourses Convention, at the global level, to this law is precisely the one of consecrating both a

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68 *E.g.* article 16 of the Helsinki Convention, article 2, paragraph 6 of the Espoo Convention, article 14 of the Danube Convention.

69 Some documents even preach *subsidiarity*, i.e. that the management of water issues should rather take place at this "lower" level. See the Dublin Statement and Report of the Conference, p. 38, f. (para. 7.11), when it proclaims that "centralized and sectoral (top down) approaches to water resources development and management have often proved insufficient to solve local water management problems. The role of governments needs to change to ensure a more active participation of people and local institutions, public and private (...) water resources should be managed on the lowest appropriate levels" or when it foresees for the private sector "a more direct role" in the planning and management activities (p. 15, para. 2.12).

70 See J.J.Gomes Canotilho, "A responsabilidade por danos ambientais – Aproximação juspublicística", *in* INA, *Direito do Ambiente*, 1994, pp. 397-409 and "Relações jurídicas poligonais, ponderação ecológica de bens e controlo judicial preventivo", *Revista Jurídica do Urbanismo e do Ambiente*, 1994, nº 1, pp. 55-66.

general obligation of periodic exchange of data and information (article 9) as well as a gradual procedure of dialogue before potentially harmful planned measures (Part III), constituted by specific duties of information, previous notification, consultations and negotiation. Sometimes this is even done with regulatory detail including the definition of deadlines for meeting these obligations (*e.g.* article 13 (a), article 15, article 16, paragraph 1, article 17, paragraph 3, article 18, paragraph 3).

This trend is then reinforced [71] in the most diverse regional or local instruments. This reinforcement is derived, on the other hand, from the fact that these procedures are also related to joint or concerted actions in all the relevant domains of the '*problematique*' of the management of international watercourses. This means that they are employed from the early stages of global planning (*e.g.* article 13 of the Water Framework Directive, article 2, paragraph 6 of the Helsinki Convention) to operations of research and development (article 5 of the Helsinki Convention). They also include the increasingly more recurrent recourse to environmental or transboundary impact assessments (recognized as a very useful tool to improve the quality of the information necessary for decision-making even at the global level – *e.g.* article 13 of the Watercourses Convention; and at the regional level, article 9, paragraph 2 and article 11 of the Helsinki Convention, Preamble and article 2 of the Espoo Convention) – whose principles, in Europe, apply or may apply even to the earlier stages of policies, plans and programs, besides the more traditional projects (*e.g.* article 2, paragraph 7), strategies against pollution of water (article 16 of the Water Framework Directive) and warning, alarm (article 14 of the Helsinki Convention) and contingency systems and mechanisms of mutual assistance (article 15 of the Helsinki Con-

71 This reinforcement derives first from the fact that these Conventions usually comprehend more duties and duties more detailed than these elementary ones consecrated in the global Watercourses Convention. Thus, the Helsinki Convention, apart from the duties of exchange of information (article 6) and consultations (article 10) also foresees other duties, mentioned further in this essay, such as the ones of cooperation in research and development activities (art. 5) or the performing of impact assessments (art. 9, para. 2 and art. 11) which do not find expression at the global level. Similarly, the Danube Convention, apart from obligations of reporting, consultations and exchange of information, foreseen in articles 10, 11, 12, also establishes duties of research and development (article 15), communication, warning and alarm systems, emergency plans (article 16) and mutual assistance (article 18). See, as well, the Luso-Spanish Convention, at articles 10 to 12 with the establishment of, for instance, duties of coordination of plans and programmes of measures, promotion of joint investigation and technological development on the matters covered by the Convention, communication, alert and emergency systems as well as joint specific programmes on the safety of hydraulic infrastructures and on the evaluation of risks.

vention) for the exceptional cases of floods, droughts and scarcity of water (*e.g.* articles 18 and 19 of the 1998 Luso-Spanish Convention), accidents of the most diverse nature (*e.g.* Helsinki Convention of 1992 on industrial accidents) and incidents of serious pollution (again, article 17 of the 1998 Luso-Spanish Convention). Furthermore, revealing how conscious it is of the natural time dimension or time projection of this difficult "battle for the environment", this new law is showing signs of willingness to project itself over a broad temporal framework, by foreseeing actions of monitoring and continuous evaluation '*ex-post*' (article 7 of the Espoo Convention as well as art. 9, para. 4 and art. 10, para. 1, l) and m) of the Luso-Spanish Convention) in a promising trend that was recently strongly endorsed by the International Court of Justice in its Judgment of the *Case concerning the Gabcikovo-Nagymaros Project* [72].

b. *Institutional cooperation*

By foreseeing (article 8 of the Watercourses Convention) and sometimes even imposing (see several special conventions [73]) that this cooperation also have an institutional or organizational dimension, this modern law has proven the degree to which it is realistically involved and concerned with questions of implementation. This may exemplarily be achieved by creating, restructuring or reinforcing joint mechanisms or commissions, such as the ones of the Commission of the Rhine [74], within the European framework, and the International Joint Commission between the United States of America and Canada, within the American context [75], paradigms '*par excellence*' of the bureaucratic representa-

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72 See the analysis of the Judgment and particularly of this question we made *in* "The Judgment of the *Case Concerning the Gabcikovo-Nagymaros Project*: Positive Signs for the Evolution of International Water Law", *YBIEL*, 1997, pp. 21-31, especially pp. 29-31.

73 *E.g.* article 18 and article 22 of the Danube Convention and Oder Convention, in general, in Europe, as well as Chapter IV of the Mekong Treaty and articles IV, V, VI, VII of the Ganges Treaty, in Asia.

74 See Johan G. Lammers, "International Cooperation for the Protection of the Watercourse of the Rhine against Pollution", *NYBIL*, 1974, vol. 5, pp. 64, ss.; Thomas Bernauer and Peter Moser, "Internationale Bemühungen zum Schutz des Rheins", *in* Thomas Ghering and Sebastien Oberthür (eds.), *Internationale Umweltregime*, Opladen, 1997, pp. 147, ss. as well as articles 6 through 12 of the 1998 Convention on the Protection of the Rhine and the website of the International Commission for the Protection of the Rhine, at http://www.iksr.de.

75 See T.Colborn *et al.* (eds.), *Great Lakes – Great Legacy?*, 1990, "Work Group on Ecosystem Health", *in* Great Lakes Advisory Board, *1993 Report to the International Joint Commission*, 1993; P. Wouters, "Allocation of Non-Navigational Uses of International Watercourses: Efforts at Codification and the Experience of Canada and United States", *Canadian Yearbook of International Law*, 1994; M. Valiante, P.Muldoon, and L. Boots, "Ecosystem Governance: Lessons from the Great Lakes", *in* O.R. Young (ed.), *Global Governance: Drawing Insights*

tion of this postulate of integration of reality. However, it seems also adequate to make reference to these particular commissions because their work has always reflected a careful concern with the relationships of the river with other eco-systemic components and in particular the sea.

It is possible to go even further, as the Helsinki Convention does in a progressive way, when, in what constitutes only an illusion of derogation (albeit very significant) to the rule of relativity of participation in international organs or organizations, it promotes the integration of coastal States which may be affected by actions taken '*vis-à-vis*' the rivers that connect these seas in the works and discussions of those river commissions (article 9, paragraph3).

There is also a noticeable emerging practice and law of joint works between river commissions and commissions committed to the protection of regional seas [76] (*e.g.* article 9, paragraph 4 of the Helsinki Convention) or "intertangling" them through the according of an observer status (article 11 of the OSPAR Convention).

Experience seems to prove that without such bodies operating under a treaty or set of treaties, for further cooperation and negotiations, entrusted with normative activities or operational ones, and without regular follow-ups of the legal framework, however well devised, this runs a serious risk of becoming a "*sleeping treaty*" [77].

c. *Substantive cooperation*

This new law also accords serious attention to the substantive contents of the cooperation which it promotes. This is understandable. Even with all the other progress made in the organizational and procedural field, such cooperation would be erratic or devoid of meaning if the substantive borders were not clarified. However, this is done both in the context of the objectives which these

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from the Environmental Experience, 1997; Jutta Brunnée and Stephen Toope, "Freshwater Regimes: The Mandate of the International Joint Commission", *Arizona Journal of International and Comparative Law*, 1998, vol. 15, pp. 273, ff.. Reference should also be made to the website of the institution: www.ijc-cmi.org .

76 Such as the ones of the Mediterranean (see Haas, *Saving the Mediterranean – The Politics of International Environmental Co-operation*, New York, 1990, pp. 214-223), of the North Sea (Sunneva Saetvik, *Environmental Co-operation between the North Sea States* – Success or Failure?, London, 1988, pp. 42-51) or the Baltic Sea (Ronnie Hjorth, *Building International Instruments for Environmental Protection – The Case of Baltic Sea Environmental Co-operation*, Linkoping, 1992, pp. 182-187 and 191-218).

77 This is the well-advised word of warning emitted by Symon Syster, *International Wildlife Law*, Cambridge, 1985, p. 301.

instruments promote [78], as well as in the vast and growing host of rights and obligations that the primary subjects of international law recognize or advocate, and particularly, we would like to suggest, in the principles which these documents recognize or consecrate. In this way, the unitary nature of the problem underlying this law is yet again mirrored in the normative field.

Once more, many of these developments can also be discerned in the "parallel" law of the sea [79], both in the general one of the United Nations Convention on the Law of the Sea as well as in the treaties on the regional seas through which some of the most daring developments in this particular sector (one may think of the most recent Protocols of the Barcelona Convention on the Protection of the Mediterranean Sea) have occurred. Through these principles and other benchmark legal solutions of the law of the sea the desirable cross-fertilization or cross-polinization of these fields of International Law is thereby happily achieved.

2. SPECIAL FORMS OF EXPRESSION

a. *Objectives*

Presently, this more recent law obeys, without noticeable exception to two main objectives [80]: that of protection (of the rivers, sea and the environment, in general) and that of use of the natural resources [81]. This connection between both objectives has implications for the meaning that should be attributed to the

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78 See *infra*, under III.B.2.a.

79 Permit us the reference to our "Do *Mare Liberum* ao *Mare Commune*? – as viçosas mutações do Direito Internacional do Mar", *Revista Jurídica da Associação Académica da Faculdade de Direito de Lisboa*, 2001, nº 24, pp. 11-24, abridged version of Paulo Canelas de Castro, "Do '*Mare Clausum*' ao '*Mare Commune*'? Em busca do fio de Ariadne através de cinco séculos de regulação jurídica do Mar", *forthcoming*.

80 This is even true in the case of the Watercourses Convention, in spite of the misleading impression caused by its restricted designation (restricted to 'utilizations'), as prove articles 20, 21, 22 and 23 (clearly on 'protection').

81 *E.g.* the very designation of the Helsinki Convention as well as its articles 2 and 3, article 2 of the Espoo Convention, articles 2 and 5 of the Meuse and Scheldt Agreements, designation and article 1 of the Danube Convention, article 1 (2) of the Oder Agreement, the 1998 Luso-Spanish Convention as can be deduced from its designation and articles 4, as well as 13 through 16 (see, equally, Paulo Canelas de Castro, "A legal regime on cooperation for the protection and sustainable use of the Luso-Spanish river basins: Looking ahead", Paper presented to the Congress *Sustainable Development of International Basins*, promoted by NATO's Scientific Committee and held in Moscow in 1997), designation and article 2 of the China-Mongolia Agreement, articles 1, 3, 4, and 5 of the Mekong Agreement, article 6 and Annex I of the 1994 Treaty of Peace between Israel and the Kingdom of Jordan.

individual and older objective of (equitable) use of resources. In fact, its separation from the one of protection is progressively more artificial and difficult. This is so because it is conditioned by its articulation with the other primary objective, *i.e.* the condition whereby the concrete uses are only legitimate when they (also) are sustainable, that they do not involve intolerable impacts on the health or carrying capacity of the environmental goods – amongst which also the sea or maritime waters. Furthermore, this decisive change has systematic classificatory implications for the very international law of freshwaters. While in the past it could stand as an autonomous juridical body, the influx of the objective "protection" determines that its present systematic '*locus*' is the Law of the Environment or, even more accurately, the more wide-encompassing International Law of Sustainable Development[82], of which it is only a special expression. This means that this law is progressively more teleologically oriented. More than a product and expression of changeable wills or interests that it would merely try to concert, more than a neutral normative bundle, bowing before the (balance of) power of the States reflected in these norms, this law also has as well a programmatic dimension which integrates, absorbs and simultaneously transcends those interests. It then becomes a Law-project, a Law-mission.

b. ***Values***

Another special feature of this new law is that it gains increasingly more substantive density. Where it used to be a vague procedure, we are now faced with a law that incorporates progressively more signs or options of legitimacy, rules which place substantive conditions on the formalistic legality that it was previously satisfied to be. Instead of the passive opportunity for action that it used to be – an opportunity assuredly subject to few and vague conditions -, the new law stands increasingly as a behavior parameter, as a pattern of validity[83].

c. ***Variations of contents***

It is precisely this trend of placing more and more constraints on the old liberties and freedoms of action of the States, which in the past were, at most,

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82 This is, we believe, one of the main implications of Judge's Weeramantry's remarkable Individual Opinion on the *Case Concerning the Gabcíkovo-Nagymaros Project*. On the legal field, see Philippe Sands, "International Law in the Field of Sustainable Development", *BYBIL*, 1994, vol. 65, pp. 303-381.

83 See, for instance, the specifications of article 6 of the Watercourses Convention which give more dense content to article 5, itself profoundly changed '*vis-à-vis*' the ILC project, in a more determinate sense, through the integration of the sustainability condition now affecting (legitimate) utilizations. In the same vein, articles 2 of both the Helsinki and Espoo Conventions, articles 3 of the Meuse and Scheldt Agreements and article 2 of the Danube Convention.

only concerted, and as such, defining a short-sighted law of neighborhoods, devoid of considerations of justice, which explains the enduring variations that may be observed between the different levels of law. In fact, while the global law – expression of a minimal common denominator among a plural and numerous range of normative representations, corresponding to radically diverse cultural and political families – is still frail and indeterminate in many subjects (one may think of the juridical content and precision of basic rules such as equitable and reasonable use or the no-harm principle [84]), the regional expression of this law defines a more precise set of true obligations. Amongst these latter ones, one may increasingly find duties which prescribe results (be they '*interdicta*' or outcomes of positive actions) and not only means (obligations to endeavor to do, standards of due diligence).

d. ***Types of new obligations***

In any case, one may say that generally the new law of freshwaters is revealing a trend to become a '*dura lex*', instead of the traditionally soft or purely aspirational law it used to be, consecrating, at the most, proto-obligations. This is, it is true, particularly evident in the regional settings, such as that of European Union or Community Law which is an expression of profound cultural integration, of shared values and aims. Therefore, it is not surprising to find the most elaborate expressions of this trend within it. Apart from setting very determinate goals defined in each particular Directive and especially the so-called "daughter Directives" of Directive 76/464 on dangerous substances (such as the prohibition of discharges of a heavy metal like cadmium over a certain emission limit [85]), this law also defines imperative deadlines [86] for the fulfillment of such obligations. It even defines special actions whose enumeration and deepening or characterization in particular complementary measures (what we might denominate a material cascade of duties) subsequently leads to foreseeing the appeal to complementary normative instruments which are also typified and prescribed. One may think, for example, of the programmes of measures, wider management plans and strategies foreseen, respectively, in articles 11, 13 and 16 as well as 17 of the Water Framework-Directive (a cascade of instruments). In

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84 See the development of these thoughts in Paulo Canelas de Castro, "The Judgment of the *Case Concerning the Gabcíkovo-Nagymaros Project*: Positive Signs for the Evolution of International Water Law", *YBIEL*, 1997, pp. 21-31.

85 Directive 84/491, *O.J.E.C.*, 1984, L 291/1.

86 Directive 91/271 on urban waste water treatment, for instance, requires all agglomerations with more than 2,000 persons to be equipped with plumbing and collecting systems for urban waste water by the year 2005.

this way, it positively indicates that it is committed to becoming true and actually influencing reality.

Amongst these typical actions or different expressions of a progressively more elaborate normative palette one may find several refractions in the law field of the most advanced state-of-the-art recommendations or instruments of the environmental management sciences. Thus, apart from the definition of ample environmental objectives (article 4 of the Water Framework Directive), the institution and register of protected areas (article 6), the determination of lawful uses of abstraction of drinkable water (article 7), the attribution of value and costs to services in the sector (article 9), the imposition of a combined approach in the prevention, control and mitigation of diffuse and point-source pollution (article 10) – be that by recourse to the instruments of emission limits, quality objectives or standards or licensing of certain sectors of activities – passing through the imposition of an integrated pollution prevention and control [87] or by management techniques such as the ones of best available technologies (*e.g.* article 3,paragraph1,(b),(f) of the Helsinki Convention) or best agricultural practices (*e.g.*article 3, paragraph1, (g) of the Helsinki Convention).

The relevance and ambition of these actions and measures becomes the more visible when one links the duties which consecrate them to such operational objectives as the ones defined in article 4 of the Water Framework Directive – those of a "*good quality of the superficial waters*" (a goal which is made more dense by physico-chemical and biological parameters) and of a "*good quality of underground waters*" (supposing qualitative and quantitative actions). In any case, what is without doubt is that the integration of a more or less complete list of such measures in the international (or for this matter, European) freshwaters law reduces its past indeterminacy and thereby enhances its chances of becoming lived reality.

e. *Principles*

This traditional indetermination of classical law is also abated, if not potentially eliminated, through the consecration in this new law of normative principles apart from those more numerous and more detailed norms enunciating such rights and duties. Besides providing these sparse rules with a unity of meaning which can be particularly decisive from the point of view of the effectiveness of this discipline, such principles also enable the most needed integration

87 This is an original procedure of licensing of industrial installations that obeys to an integrated approach demanding the consideration of all the elements available. See Directive 96/61, *O.J.C.E.*, 1996, L257/26. For a measure of skepticism and criticism as to its viability, see L.Krämer, *E.C. Treaty and Environmental Law*, 3rd ed., London, 1998, p. 8.

of '*lacunae*' (be they gaps of formulation or of outreaching foresight), since these '*lacunae*' usually result either in abuses or injustices.

By pointing to this consequence, we believe to be additionally highlighting their essence[88]: more than normative structure – *i.e.* a rule characterized by more abstraction and generality and thereby by another "numerical" capacity to cover life situations -, these principles matter in terms of their special nature[89]. They are much less acts of will and much more expressions of transcending value. Consequently, this Law becomes not only teleological but also axiological – which is to say, a law with an '*ethos*'. In turn, this has a second notable consequence: for this reason, this law and these particular normative structures enjoy a particular quality or juridical force: a (albeit still undefined) normative-functional primacy[90]. This belief in their capacity of assuring the principal and necessary normative answers or solutions for the problems that life poses expresses itself in the fact that they are usually named basic or fundamental principles. Moreover, it is implicitly recognized in the very positive law as even happens in the case of article 3 of the Watercourses Convention, in spite of the quite equivocal and in any case unfortunate formulation.

These general features are then confirmed when one considers the contents of each of these principles.

Thus, the principle of sustainable development[91] imposes the conciliation between "economic imperatives and environmental imperatives", to bor-

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88 On this, see the excellent analysis of Gomes Canotilho, *Direito Constitucional e Teoria da Constituição*, Coimbra, 1997, pp. 1034-1037 as well the, still today, inescapable magistral work by J. Esser, *Grundsatz und Norm in der richterlichen Fortbildung des Privatrechts*, 3rd. ed., Tübingen, 1974. It is equally important to refer to the theoretical '*apport*' by the regimes theory which views principles as instances mediating goals and practical interests, as propositions directing individual and joint conduct. See, especially, Stephen D.Krasner, "Structural Causes and Regime Consequences: Regimes as Intervening Variables", *in* Stephen D.Krasner (ed.), *International Regimes*, 1983, p. 2. Very recently, reference should also be made to Nicolas de Sadeleer, *Environmental Principles. From Political Slogans to Legal Rules*, Oxford, 2002, Oxford University Press.

89 Another important feature of their nature is the condition of fundamental principles of either customary or treaty origin, rather than general principles of law.

90 More extensively and with the recourse to passages of the International Court of Justice's ruling in the *Case Gabcikovo-Nagymaros* where we believe to find support for this idea, Paulo Canelas de Castro, "The Judgement of the *Case Concerning the Gabcikovo-Nagymaros Project*: Positive Signs for the Evolution of International Water Law", *YBIEL*, 1997, pp. 21-31, especially Title VIII.

91 Or, as some rather have it, the *concept* of sustainable development. See Gerhard Hafner, "General Principles of Sustainable Development: From Soft Law to Hard Law", *in* Malgosia Fitzmaurice and Milena Szuniewicz (eds.), *Exploitation of Natural Resources in the 21st Century*, The Hague, 2003, p. 54.

row the eloquent and pertinent formula of the International Court of Justice ruling in the *Case Gabcíkovo-Nagymaros* [92]. This means that this principle underlines the environmental dimension of the problem and at the same time lends to it a "weight" equivalent to the one enjoyed by social-economical considerations. It also postulates that the variable and particular concerns of each agent, which are a function of his circumstance, be rather assessed by taking global parameters and ones transcending the present context into consideration. The (sub)principle of equity to future generations [93] underlines this dimension of the problem but also grants rights of participation to multiple subjects and voices, even inorganic ones, thus contributing to transcend the traditionally highly selective circle of subjects of the international community and furthering the transparency of the procedures and, ultimately, the democratisation of this society as well as ensuring the progressively more demanded good governance thereof.

In the same sense, but also in that of prescribing a pro-active outlook, goes the precautionary principle [94]. It is also important in that it accords value to the epistemic communities [95], even if, simultaneously, and in an almost paradoxical move, this Law and this principle in particular also limit or relativise their capacity of intervention in that they demand strategic or political vision and decisions [96]. This is something that implies broader participation within the democratic system, a result foreseen by the principle of this very name, which underlies most of the duties of publicity and providing access to information disseminated in almost every treaty in this sector, without which this participation would run the serious risk of being purely nominal [97].

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92 *Case Concerning the Gabcíkovo-Nagymaros Project (Hungary v. Slovakia)*, *ICJ Reports*, paragraph 103 as well as *ILM*, 1998, vol. 37, pp. 162, ff...

93 See Edith Brown Weiss, *In Fairness to Future Generations*, Tokyo, 1989.

94 See Harald Hohmann, *Präventive Rechtspflichten u. -Prinzipien des modernen Umweltvölkerrechts zwischen Umweltnutzung und Umweltschutz*, Berlin, 1992, Duncker und Humblot; or, in English, *Precautionary Legal Duties and Principles of Modern International Environmental Law*, London, 1994, Graham & Trotman.

95 Haas argues persuasively that the development of some regimes may benefit substantially from the involvement of epistemic communities. See Peter M. Haas, "Do Regimes Matter? Epistemic Communities and Mediterranean Pollution Control", *International Organization*, 1989, vol. 43, pp. 377-403 and *Saving the Mediterranean – The Politics of International Environmental Co-operation*, New York, 1990, pp. 55, ff. However, M. List and V. Rittberger, "Regime Theory and International Management", *in* A. Hurrell and B. Kingsbury (eds.), *International Politics of the Environment*, Oxford, 1992, pp. 103, ff. express misgivings at the inevitability of this "truth".

96 A function whereby the State is "rediscovered"and functionally modernised. See Helmut Wilke, *Supervision des Staates*, Frankfurt am Main, 1997, Surkamp.

97 See specifically the Convention on Access to Information, Public Participation in Decision-

Additionally, there is the principle of prevention which, integrating the wisdom of the realists, enjoins the avoidance of problems, impacts or harm rather than a difficult and possibly unattainable remedy, or at least a remedy which is somehow always insufficient or illusory. It also requires that the causes of the risks inherent to our contemporary societies and the international one, in particular, be attacked, preferably to dealing with the effects.

In somewhat the same vein, the polluter-pays principle should also be mentioned, especially when conjugated with the principle of correction at source. Both induce actions and the appeal to the best available technologies and best environmental practices, to cleaner methods and instruments of developing some activities. Furthermore, both contribute to thinking and acting in an environmentally-friendly manner from the outset of the production chain in order to avoid an onerous internalization of environmental costs.

Most of these principles, in some variable form, also signify that, even in a setting of use and development of natural resources, such as the freshwater resources, there must be a concern with preserving the fundamental capital of the environmental goods [98] and not one of turning them into objects of deterioration policies or actions. Otherwise, the future generations will not be able to enjoy them. Such a hypothesis would actually be contradictory to another fundamental principle of both modern international law, in general, and this particular law. One is referring to that of the most elementary material justice or equity [99], be it under the particular form of the intra-generational equity (sub) principle or in the one of the inter-generational equity (sub) principle.

One may lastly also make reference to a principle of direct and specific pertinence to our subject: the principle of prohibition of transfer of pollution from one environmental component to another one (see, expressly, article 9 of the Helsinki Convention).

As regards their consequences, it is legitimate to expect, once applied, that these principles will redound in a progressive amelioration of the reality of the rivers in the quality of their waters and sediments and, by this means, in the proper balance of the sea to which they are connected. As a matter of fact, the

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Making and Access to Justice in Environmental Matters, adopted in Aarhus on the 25th June of the current year, in the framework of the United Nations Economic Commission for Europe.

98 This is a notion which tries to convey their inherent worthiness or intrinsic value, independent of their human usefulness (which the notion "resource" more appropriately conveys). Similarly, B. Norton, "Commodity, Amenity and Morality: The Limits of Quantification in Valuing Biodiversity", *in* E. O. Wilson, *Biodiversity*, 1988 and F. Matthews, *The Ecological Self*, 1991, chapters 3 and 4.

99 Thomas Franck, "Fairness in the international and institutional system", *RCADI*, 1993, vol. III.

virtues of these principles transcend the special law of the international watercourses or even what we might call the emerging law of the freshwaters-sea interface which seems to be insinuating itself in the uneasy adjustment of the building block of the law of the sea and the other building block of freshwaters law in their mutual cross-fertilization. As these principles are globally valid in any circumstance of environmental crisis, they lend unity and contribute to the most necessary and desirable consistency and complementarity of these and even other law branches that, in spite of their separate conception, are also relevant to this subject [100], either due to the complexity of the ecosystem in cause or that of the problems caused by that interface. In their multiple integrative capacity, these principles equally constitute a normative message particularly appropriate for the need of continuity, adequacy and unity of the juridical answer to the complex and dynamic challenge of eco-systemic health, over time.

Simultaneously, these principles also function as operational links and bridge this inceptive field of law or superposition of laws with other important normative developments. One may think, for example, of the global POPs Convention [101] and the regional protocol on persistent organic pollutants (POPs) under the Convention on Long-range Transboundary Air Pollution, adopted in Aarhus in June 1998, that of the global legally binding instrument for the application of the prior informed consent (PIC) procedure for certain hazardous chemicals and pesticides in international trade [102] and the decisions and recommendations adopted in the OSPAR framework from whose effectiveness the health of the seas is visibly also dependant.

Finally, they additionally underline the relevance of several fundamental problems which this evolving juridical regime still faces and from whose solution its effectiveness is itself apparently dependant. We can just highlight two of them which we shall also only marginally address since a proper treatment thereof, however important, would already entail surpassing the necessary limits of this study: the questions of the systematic location of this inceptive Law, connected

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100 Wondering about this possibility, see Markus Reimann, *Die nicht-navigatorische Nutzung internationaler Süsswasserressourcen im Völkerrecht*, Frankfurt am Main, 1999, Peter Lang Verlag, pp. 53-56.

101 See UNEP/POPS/INC.1/ 1,2, 4, 5 and 6.

102 UNEP/FAO/PIC/INC.1. At the regional European Community level the PIC system has been mandatory since Regulation 2455/92 of the 23rd July 1992 on the import and export of dangerous chemical products entered into force (Annex I of this Regulation lists the hazardous products whose import and export is forbidden, while Annex II made binding the previous voluntary PIC system as to the export of some hazardous products to third countries).

with an inquiry on the best strategy of construction and implementation of this law (1), and the question of the appropriate role of the State in such a context (2).

IV. Final notes about two major outstanding issues

1. The question of the consistency of the normative system and of the best strategy of construction and implementation of this emerging Law

The first question whose treatment we believe to be indispensable is that of the unity and consistency of this normative system. The special problems of the relationship between national law and international law and the one of the better normative strategy and better normative technique of construction of this law are also related to this question.

These questions suppose a '*malaise*' due to the abundance of the normative instruments which determine their progress and their very plural nature and scope. There are indeed almost too many customs, treaties, declarations, plans, programmes, of a general or special character, global, regional, sub-regional or local, concerning the main themes of international freshwater law or international law of the sea.

They seem to firstly pose the problem of what should be the most adequate normative strategy in the attempt to save the intrinsic balance within Nature and particularly that of the relationship of Nature and Humankind. Is this strategy one of the (maximum) unity which might involve the drafting of a big Environmental Code at the global level [103], even if composed of diverse chapters, where one would encyclopedically register, in a systematic and coherent whole, principles, rights and obligations? Several examples of law or proposals of law in this sense already exist, both at a regional level and at that of the expression of coincidental doctrinal concerns [104]. However, they rather seem to underline the limitations of this via of construction or deepening of law. These limitations reproduce, in some measure, similar anxieties already experienced

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103 See Gerhard Hafner, "General Principles of Sustainable Development: From Soft Law to Hard Law", *in* Malgosia Fitzmaurice and Milena Szuniewicz (eds.), *Exploitation of Natural Resources in the 21st Century*, The Hague, 2003, pp. 61-65.

104 Experts Group on Environmental Law of the World Commission on Environment and Development, *Environmental Protection and Sustainable Development, Legal Principles and Recommendations*, London, 1987.

in efforts of identical nature in the more integrated domestic laws. Amongst the criticisms that one can make to these ideas, an important place is assumed by the doubt that all relevant domains – and they are so many – can be sufficiently treated. Secondly, one may note that such codification efforts tend to rigidify solutions, while it may seem more sensible to opt for more flexible methods capable of accompanying the natural evolution of the object with which this law deals. Otherwise, an uneasy impression may be created whereby this law appears, in fact, as a backwards law, always slow in responding to the normative needs evidenced by the (next) serious environmental accident. In any case, it is the very notion of time and of its importance in the conception and in the consolidation of this law that seems to advise an attitude of more modesty, flexibility and of the postponement of an effort which would otherwise be cyclopic.

It thus seems preferable to follow the less grandiloquent path charted hereto (one of openness to the diverse legal initiatives and instruments the States may be ready to adopt: if need be also '*soft law*' ones [105]), even if simultaneously always having in mind and indeed pursuing the fundamental principles which, further to provide a sense of normative orientation, also permit to overcome the natural difficulties of the long journey ahead, and are instrumental in the bridging the gaps among formerly disparate legal branches and legal areas and their desirable cross-fertilization.

2. The question of the actors to partake in this play and of the role of the State

As for the second question, it may be sufficient to stress that the State is far from disappearing from this legal scene [106]. On the contrary, its resolute action and its domestic Law along with it, are a fundamental '*sine qua non*' for the crucially needed consolidation, further development and implementation of this inceptive International Law.

However, the persistent and prominent role of the State, henceforth with a better understanding of its functions [107] and in resolute proactive cooperation

105 We thus believe that in this field in need of urgent progress to meet the challenge of sustainability a relaxation of the doctrinal dichotomy of binding and non-binding law is to be welcomed and held preferable to a binary notion of Law, one concentrated on denouncing the risks of relative normativity. Prosper Weil, "Towards Relative Normativity in International Law", *AJIL*, 1983, vol. 77, pp. 413-422.

106 Susan Strange, *The Retreat of the State: The Diffusion of Power in the World Economy*, Cambridge, 1996.

107 See Helmut Wilke, *Supervision des Staates*, Frankfurt am Main, 1997, Surkamp.

with other States, and not anymore in the traditional passive coexistence [108], is not to be confused either with a quasi-monopolistic position or legal standing.

It is rather vital that the State, both in the international setting as well as in the national one, proves to have the will and the capacity to cooperate with other non-State actors (epistemic communities, NGOs, associations of users, industries, peasants, indigenous or vulnerable communities) who should equally be involved or integrated and called to participate to share both the benefits and the burdens of this process of dual protection of environmental goods and development of natural resources, to provide valuable, enriching insights for the complex and difficult decisions to be made in such contexts of risk and uncertainty or to help in controlling the implementation thereof or contributing to the enforcement task, again taking advantage of their information, knowledge, or proximity to the facts or situations. This is a fundamental reason for the State to devise procedures and establish institutions which permit and channel these inputs of the stakeholders and civil societies and that serve as appropriate '*fora*' for the interactions of all these different actors united in the common struggle against the degradation of the Environment, the fight for a proper balance between Mankind and Nature.

Because, as the International Court of Justice so rightly said, and twice [109]:

"*The Environment is not an abstraction*". It rather concerns "*the quality of life and the very health of human beings*".

That is precisely why it is only fair that the State and International Law ensure the wider access to information, participation in decision-making and access to justice to the individuals, organized or not. Thomas Franck, relating that to the enduring current challenge of International Law in the whole, proclaimed it [110] in no better terms:

"*The fairness of international law, as of any other legal system, will be judged, first by the degree to which the rules satisfy the participants' expectations of justifiable distribution of costs and benefits, and secondly by the extent to which the rules are made and applied in accordance with what the participants perceive as right process*".

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108 The shift from coexistence to cooperation as founding models of International law and organisation of the International society was visionarily announced by Wolfgang Friedmann, *The Changing Structure of International Law*, London, 1964, pp. 45-71. The theory was further analysed and pursued by Allen L. Springer, *The International Law of Pollution*, Westport, 1983, pp. 39-43.

109 Cfr. *Advisory Opinion* of 8 July 1996, *ICJ Reports*, 1996, pp. 241, ff. and *Case Concerning the Gabcíkovo-Nagymaros Project*, paragraphs 53 and 112.

110 See Thomas Franck, *Fairness in International Law and Institutions*, Oxford, 1995, p. 6.

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