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The Role of Customary Rules and Principles of International Environmental Law in the Protection of Shared International Freshwater Resources

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ABSTRACT

Notwithstanding the recent elaboration of a number of global and regional conventional instruments expressly concerned with the environmental protection of international watercourses, certain rules and principles of customary international law have developed in recent decades that continue to have a significant role to play in this regard. In recent years, debate has raged over the precise legal status and normative content of many international environmental norms and principles, some of which are often assumed to enjoy binding force in customary international law. While some commentators characterise these norms as "declarative" rather than customary law, suggesting that their usefulness may be limited in relation to third-party dispute settlement by courts and arbitral tribunals, this characterisation possibly ignores the fact that such norms have an important role to play in terms of voluntary compliance and in terms of bilateral and multilateral negotiations. Further, certain international environmental norms contained in treaty instruments, though declaratory in nature, can be expected to play a significant role in informing the rules and principles, in particular those relating to the equitable and reasonable utilisation of watercourses and the prevention of significant harm to other watercourse States. More specifically, trends identified both in the treaty practice of States and in soft law guidelines defined by international institutions can be taken into consideration to define more concretely the material contents of "due diligence." Of course, the consistent inclusion of normative rules and principles in the declarations and resolutions of international organisations contributes significantly to the process of custom generation. This process might be expected to

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have made a particularly significant contribution to the development of international environmental law where the use of soft law declaratory instruments has been so widespread. The single most important source of rules and principles that may have crystallised into generally binding norms of customary international environmental law is the accumulated corpus of relevant multilateral and bilateral treaty provisions, many of which contain elaborate environmental rules. In turn, the inclusion of certain rules and principles in treaties must greatly enhance their status as established or emerging rules of general customary law. This article outlines the results of an extensive survey of international conventions and soft law instruments, State, judicial and arbitral practice, and academic commentary relating to the normative development and substantive content of each of these purported customary environmental rules and principles and to their application in the area of shared freshwater resources. Ultimately, it aims to highlight the role of such rules and principles in ensuring, by means of their detailed elaboration and normative sophistication, that an appropriate weighting is allocated to considerations of environmental protection in determining an equitable regime for the utilisation of shared international water resources under well-established rules of international water law.

I. INTRODUCTION

International law relating to the utilisation of shared freshwater resources has become much clearer in recent years. The principle of "equitable utilisation" is the pre-eminent rule relating to the utilisation of international watercourses. According to this rule, the determination of a reasonable and equitable regime for the utilisation of an international watercourse is usually understood in terms of a number of familiar relevant factors or criteria.[1] However, among the various factors

1. For example, Article 6(1) of the 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses, *adopted by the U.N. General Assembly & opened to signature* May 21, 1997, 36 I.L.M. 700 [hereinafter U.N. Convention], and Article V(2) of the International Law Association's 1966 *Helsinki Rules on the Uses of the Waters of International Rivers*, *in* THE LAW OF INTERNATIONAL DRAINAGE BASINS 783–84 (A.H. Garretson et al. eds., 1967) both emphasise the following factors as relevant in determining whether the regime of allocation of uses and/or quantum-share of waters of a shared freshwater resource is reasonable and equitable:

- the social and economic needs of the watercourse States;
- the population dependent on the watercourse;
- the existing and potential uses of the waters;

impacting upon application of this principle, it is arguable that considerations relating to the environmental protection of international watercourses are steadily increasing in terms of their significance and complexity. This is largely due to the emergence in general and customary international law of a comprehensive suite of rules, principles, and legal concepts requiring enhanced protection of various aspects of the natural environment of international watercourses and riparian States. The normative content of such rules and principles is becoming more clearly defined, both through their ongoing elaboration into a sophisticated corpus of legal requirements and through growing understanding of their mutual relevance. Indeed, it can be argued that the normative sophistication and comprehensive coverage of general environmental rules give added "voice" to environmental concerns within the determination of a reasonable and equitable regime for the utilisation of an international watercourse. In addition, these rules and principles are increasingly supported by sophisticated rules of procedure, adding further to their normative clarity and justiciability.

This article is based on a detailed survey and analysis of declaratory and conventional instruments, judicial and arbitral practice, recorded State practice, codifications by intergovernmental agencies and learned associations, and academic commentary relating to a number of established and emerging rules and principles of substantive and procedural international environmental law. These substantive rules include the duty to prevent transboundary pollution, the duty to co-operate, the duty to conduct transboundary environmental impact assessments, the doctrine of sustainable development, the principle of intergenerational equity, the principle of common but differentiated responsibility, the precautionary principle, the polluter pays principle, and the ecosystems approach. The procedural rules include the duty to notify, duties relating to the ongoing exchange of information, the duties to consult and to negotiate in good faith, the duty to warn, and duties relating to the settlement of disputes.

The author examines the likely status of each rule or principle in customary international law and its likely normative content. He then investigates the extent to which each of these rules has been applied to the law on international watercourses in particular, and whether and how each has been incorporated into key conventional instruments on the non-navigational uses of international watercourses. Further, he

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- □ □□ the efficiency of actual or planned utilisations;
- □ □□ the effects on other watercourse States;
- □ □□ the availability of alternative sources; and
- □ □□ certain physical geographical characteristics of the watercourse.

attempts to elaborate upon the likely impact of each rule or principle in relation to the significance of environmental considerations within the overarching doctrine of equitable utilisation of international watercourses.

It is entirely beyond the scope of this article to set out detailed conclusions regarding all the rules and principles of international environmental law that impact upon the utilisation of international watercourses. Rather, it will highlight very briefly a number of such rules and principles, both substantive and procedural, that have been articulated in recent highly influential conventions and will point out their practical relevance for the environmental protection of international watercourses. The author argues that the wide international acceptance and normative specificity and sophistication of the evolving rules of general international environmental law, coupled with the existence of competent institutional machinery for their elaboration and implementation, give environmental considerations greater "voice" and, thus, greater relative significance in the determination of a reasonable and equitable regime for the utilisation of international watercourses.

II. SUBSTANTIVE RULES AND PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW

In addition to the provisions of the 1997 U.N. Convention on the Non-Navigational Uses of International Watercourses[2] and other conventional provisions, a number of customary international legal rules and principles have developed in recent decades that might play a role in the environmental protection of international watercourses. The existence of and, to a lesser degree, the normative status of these rules and principles have largely been defined by "the progressive gathering of recurrent treaty provisions, recommendations made by international organizations, resolutions adopted at the end of international

2. U.N. Convention, *supra* note 1 (Treaty not yet in force). While 103 States approved the 1997 Resolution to adopt the Convention, ratifications remain insufficient to bring it into force. Under Article 36 of the U.N. Convention, entry into force requires 35 instruments of ratification, acceptance, accession, or approval, but as of July 2002, only 12 States were party to the Convention. *Id.* at 715. The status of the Treaty as of October 5, 2005, may be found at http://internationalwaterlaw.org/IntlDocs/Watercourse_status.htm. Though the Convention has not entered into force, it is likely to remain highly influential and persuasive as a statement of current customary and general international law on watercourses as it is the culmination of over 20 years of in-depth research by the International Law Commission into the state of international watercourse law and practice.

conferences, and other texts that can be said to have influenced State practice."[3]

Such rules include the obligation to prevent transboundary pollution and the rules relating to responsibility and liability for such pollution, the obligation to co-operate, and the requirement for environmental impact assessment for projects having transboundary effects. These customary principles include the precautionary principle, sustainable development, intergenerational equity, and common-but-differentiated responsibility. Other emerging principles may eventually form part of the corpus of relevant customary international environmental law, including the so-called "ecosystems approach."[4] The key significance of such rules and principles is that, as they represent the accumulated legal expression of environmental protection concerns by the international community, they indicate which issues will likely be identified and articulated as central in the environmental protection of international rivers and the means by which such issues will be considered. The normative content of the rules and principles of customary and general international law on the environment is likely to inform the interpretation and application of the rules and principles that are outlined in the environmental provisions of the 1997 Convention and other relevant instruments. Indeed, it is later submitted that it is largely by virtue of the very sophistication and extensive elaboration of these substantive and procedural rules and principles of general international environmental law that environmental considerations will be such a prominent factor in determining an equitable regime for the utilisation of shared freshwater resources.

Customary international law will continue to play a significant residual role in the settlement of international environmental disputes concerning shared water resources as it may apply to States that are not party to the 1997 Convention or other conventional arrangements or to disputes between State parties that are not covered by the Convention due to the use of reservations. Indeed, even the U.N. General Assembly recognised that most situations were covered by customary, not conventional, international law, despite the existence of numerous treaties governing the use of particular international rivers, before

3. Pierre-Marie Dupuy, *Overview of the Existing Customary Legal Regime Regarding International Pollution, in* INTERNATIONAL LAW AND POLLUTION 61, 61 (Daniel Barstow Magraw ed., 1991).

4. For a discussion of each of the abovementioned rules and principles, see *infra*.

referring the topic of the non-navigational uses of international watercourses to the International Law Commission for codification.[5]

In recent years, debate has raged over the precise legal status of many international environmental norms and principles that are often assumed to enjoy binding force in customary international law. Taking an examination of actual State behaviour as the basis for determining whether a norm is part of customary law, Daniel Bodansky notably concludes that, "[a]ccording to the orthodox account of customary international law, few principles of international environmental law qualify as customary."[6] Regarding the prohibition on transboundary harm, the precautionary principle and the duty to notify, he observes that, with the possible exception of the International Law Commission and some work of the International Law Association, legal writers' assertions about customary international law are not based on surveys of State behaviour but on the utilisation of texts produced by States and by non-State actors, such as courts, arbitral panels, intergovernmental and non-governmental organizations, and legal scholars.[7] Such texts include cases, statutes, treaties, codifications, resolutions, and declarations. Therefore, Bodansky characterises these norms as "declarative"[8] rather than customary law but concedes that, while their usefulness may be limited in relation to third-party dispute settlement by courts and arbitral tribunals, such norms can play an important role in terms of voluntary compliance and bilateral and multilateral negotiations.[9] Indeed, as courts and arbitral tribunals play, at least as yet,[10] a relatively

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5. *See* The Secretary General, Survey of International Law—Working Paper prepared by the Secretary-General in the light of the decision of the Commission to review its programme of work, ¶ 285, U.N. Doc. A/CN.4/245 (Apr. 23, 1971), reprinted in 2 Y.B. INT'L L. COMM'N 61–62 (1971). *See also* Gerhard Hafner & Holly L. Pearson, *Environmental Issues in the Work of the International Law Commission*, 11 Y.B. INT'L ENVTL. L. 3 (2000).

6. Daniel Bodansky, *Customary (and Not So Customary) International Environmental Law*, 3 IND. J. GLOBAL LEGAL STUD. 105, 112 (1995). *See also* Hiram E. Chodosh, *Neither Treaty Nor Custom: The Emergence of Declarative International Law*, 26 TEX. INT'L. L.J. 87 (1991); N.C.H. Dunbar, *The Myth of Customary International Law*, 8 AUSTL. Y.B. INT'L L. 1 (1978–80).

7. Bodansky, *supra* note 6, at 113.

8. *Id.* at 116. *See also* Chodosh, *supra* note 6.

9. Bodansky, *supra* note 6, at 117–19. *See also* Markus Ehrmann, *Procedures of Compliance Control in International Environmental Treaties*, 13 COLO. J. INT'L ENVTL. L. & POL'Y 377 (2002). *See generally* COMMITMENT AND COMPLIANCE: THE ROLE OF NON-BINDING NORMS IN THE INTERNATIONAL LEGAL SYSTEM (Dinah Shelton ed., 2000); *see especially* Alexandre Kiss, *Commentary and Conclusions*, *id.* at 223–42.

10. Bodansky, *supra* note 6, at 117. Bodansky speculates that "[t]he establishment of an environmental chamber of the International Court of Justice and the recent cases between Nauru and Australia and between Hungary and Slovakia may signal the emergence of a greater judicial role." *Id.* Similarly, Judge Stephen Schwebel has noted that "a greater range of international legal forums is likely to mean that more disputes are submitted to

minor role in the resolution of international environmental disputes, "declarative" norms can play a very significant role by exerting a compliance pull on States[11] and, more importantly, by influencing negotiations and other second-party control mechanisms.[12]

Further, these "declaratory" international environmental norms can be expected to play a significant role in informing the rules and principles contained in the 1997 Convention and other treaty instruments. As Pierre-Marie Dupuy points out,

> A number of *guidelines* emitted by these bodies [international institutions, both intergovernmental and, at a lower stage, non-governmental (*e.g.*, the Institut de Droit Internationale, the International Law Association, and the International Union for Conservation of Nature)] have penetrated gradually into contemporary State practice. In certain cases, these guidelines bring an important contribution to the definition of international standards on

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international judicial settlement. The more international adjudication there is, the more there is likely to be; the 'judicial habit' may stimulate healthy imitation." Statements of Judge Stephen M. Schwebel, President of the International Court of Justice, to the 54th General Assembly, U.N. Doc. A/54/PV.39, at 3 (Oct. 26, 1999)."[I]ncrease in recourse to the Court [International Court of Justice] is likely to endure, at any rate if a state of relative détente in international relations endures." Statements of Judge Stephen M. Schwebel, President of the International Court of Justice, U.N. Doc. A/53/PV.44, at 4 (Oct. 27, 1998). For a discussion on the background to the establishment of the Special Environment Chamber of the International Court of Justice and the growing number of environmental cases coming before the Court, see Maglosia Fitzmaurice, *Environmental Protection and the International Court of Justice*, *in* FIFTY YEARS OF THE INTERNATIONAL COURT OF JUSTICE: ESSAYS IN HONOUR OF SIR ROBERT JENNINGS 293, 305-14 (Vaughan Lowe & Maglosia Fitzmaurice eds., 1996). In relation to the Commission of Mediation, Arbitration, and Conciliation of the Organisation of African Unity, see T.O. Elias, *The Charter of the Organization of African Unity*, 59 AM. J. INT'L L. 243, 263-64 (1965).

11. *See* Thomas M. Franck, THE POWER OF LEGITIMACY AMONG NATIONS 41-42 (1990); Mary Ellen O'Connell, *Enforcement and the Success of International Environmental Law*, 3 IND. J. GLOBAL LEGAL STUD. 47 (1995).

12. Bodansky concludes that

> the biggest potential influence of these norms is on second-party control mechanisms. Most international environmental issues are resolved through mechanisms such as negotiations, rather than through third-party dispute settlement or unilateral changes of behaviour. In this second-party control process, international environmental norms can play a significant role by setting the terms of the debate, providing evaluative standards, serving as a basis to criticize other states' actions, and establishing a framework of principles within which negotiations may take place to develop more specific norms, usually in treaties.

Bodansky, *supra* note 6, at 118-19.

> the basis of which the due diligence to be expected from "well-governed" modern States can be established.[13]

More specifically, Dupuy suggests that both trends identified in treaty practice and soft law guidelines defined by international institutions can be taken into consideration "to define more concretely the material contents of 'due diligence.'"[14]

Of course, the consistent inclusion of normative rules and principles in the declarations and resolutions of international organisations, and of the United Nations in particular, contributes significantly to the process of custom generation. In relation to repeated pronouncements in U.N. resolutions and declarations, Judge Tanaka commented in his dissenting opinion in the *South West Africa Case (Second Phase)*, "This collective, cumulative and organic process of custom generation can be characterised as the middle way between legislation by convention and the traditional process of custom making and can be seen to have an important role from the viewpoint of development of international law."[15] This process might have made a particularly significant contribution to the development of international environmental law where the use of soft law declaratory instruments has been so widespread. Though some prominent commentators maintain that, in relation to the formation of custom, "what states do is more important than what they say,"[16] others, notably Michael Akehurst, criticise this distinction between the "material components" and other "elements" of "practice," noting that "it is artificial to try to distinguish between what a state does and what it says."[17] Indeed, Harold Hohmann

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13. Dupuy, *supra* note 3. Dupuy further concludes that "[s]oft law [international directives or undertakings that are not, strictly speaking, binding in themselves] must be taken into account in the tentative analysis and interpretation of what is certainly already 'hard law,' that is, international directives or undertakings that are binding of their own accord under international law." *Id.* at 62.

14. *Id.* at 69. In the context of the duty placed on States under international law to prevent transboundary harm by means of pollution, "due diligence" generally refers to a relative obligation as to performance, based on reasonable standards of care and prudence, rather than an absolute obligation as to result.

15. South-West Africa Case (Eth. v. S. Afr.; Liber. v. S. Afr.), 1966 I.C.J 248, 292 (July 18).

16. Stephen M. Schwebel, *The Effect of Resolutions of the U.N. General Assembly on Customary International Law*, 73 AM. SOC'Y INT'L L. PROC. 301, 302 (1979). In support of this view, see ANTHONY D'AMATO, THE CONCEPT OF CUSTOM IN INTERNATIONAL LAW 88-91 (1971). *See generally* H. Meijers, *On International Customary Law in the Netherlands*, *in* ON THE FOUNDATIONS AND SOURCES OF INTERNATIONAL LAW 83-84 (Ige F. Dekker & Harry H.G. Post eds., 2003).

17. Michael Akehurst, *Custom as a Source of International Law*, *in* 47 BRIT. Y.B. INT'L L. 1, 3 (1974-75).

notes that, like "no other area of international law [international environmental law] is influenced by such a multitude of guidelines, resolutions and other declarations," the grouping of which documents "in the category of soft law (in contrast to hard law) does not do justice to the peculiarities of modern ways of making international environmental law."[18] In his view, to identify customary law, State practice may be reduced to diplomatic practice where the following three criteria are fulfilled:

> (1) the values at the basis of the resolutions concerned are shared by all States—and all States see the need to establish the legal rule quickly;
>
> (2) there must be an absence of pre-existing customary law to be displaced; and
>
> (3) there should be limited evidence of (external) State practice.[19]

Hohmann sees the primary role of soft-law instruments in the identification of custom as that of "the solidifying of indicators for a documentation of the opinio juris" of States.[20] However, he also points out that

> the establishment of duties of customary law has also occurred through agreements...if indications exist for the formation of opinio juris, if an agreement adopts this rule, if the rule can be generalized and if it is contained in a global agreement or in at least two regional agreements of two different regions.[21]

Thus, "rules of customary law initiated through declarations find their way into agreements and vice versa."[22]

One view attaches significance to declaratory instruments in explaining the elusive distinction between general principles of international law and rules of customary international law. According to Alfred Verdross,

> The difference between the creation of a principle of law and that of a customary rule lies therefore in the fact that in

18. HAROLD HOHMANN, PRECAUTIONARY LEGAL DUTIES AND PRINCIPLES OF MODERN INTERNATIONAL ENVIRONMENTAL LAW 335 (1994).

19. *Id.* at 335 n.12.

20. *Id.* at 336.

21. *Id.* at 337.

22. *Id.*

> the latter case, the opinio juris expresses itself in the constant practice of States, while in the former case, the principle of law is born at the moment when it is expressly recognised by the States within or outside the General Assembly.[23]

Katia Boustany points out that the actual implementation of such principles can transform them into customary rules,[24] in which case "they do not disappear, but are hidden by customary rules with the same content."[25]

At any rate, the corpus of relevant multilateral and bilateral treaty provisions comprises the single most important source of rules and principles that may actually have crystallised into generally binding norms of customary international environmental law. Explaining the role of the International Court of Justice in this process, Sir Robert Jennings declared, in a statement made to representatives gathered during the proceedings of the 1992 U.N. Conference on Environment and Development, that it is "a principal task of the ICJ to decide, applying well-established rules and criteria, whether the provisions of multilateral treaties have or have not developed from merely contractual rules into rules of general customary international law."[26]

Of course, the consistent inclusion of a normative provision in bilateral treaties also provides significant evidence of acceptance of a rule in international law. In relation to shared water resources in particular, by 1963, a U.N. publication listed 253 treaties on non-navigational uses of international rivers.[27] In 1974, another U.N. document identified a further 52 bilateral and multilateral agreements that had been concluded in the intervening period.[28] Clearly, this reservoir of treaty practice greatly assisted the International Law Commission in the elaboration of the 1994 Draft Articles, which formed the basis of the 1997 Convention

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23. Katia Boustany, *The Development of Nuclear Law-Making or the Art of Legal "Evasion,"* 61 NUCLEAR L. BULL. 39, 42 (1998) (quoting Alfred Verdross, *Les principes généraux de droit dans le système des sources du droit international, in* MÈLANGES GUGGENHEIM 521, 526 (1968)).

24. *Id.*

25. *Id.* (quoting NGUYEN QUOC DINH ET AL., DROIT INTERNATIONAL PUBLIC 345 (1994)).

26. *See* Sir Robert Jennings, *Need for Environmental Court?*, 22 ENVTL. POL'Y & L. 312, 313 (1992); Fitzmaurice, *supra* note 10, at 300 (citation omitted).

27. U.N. Legislative Series, *Legislative Texts and Treaty Provisions Concerning the Utilization of International Rivers for Other Purposes than Navigation*, U.N. Doc. ST/LEG/LER.B/12 (1974). *See also* Charles Odidi Okidi, *Preservation and Protection Under the 1991 ILC Draft Articles on the Law of International Watercourses*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 143, 144 (1992).

28. The Secretary-General, *Report of the Secretary-General on Legal Problems Relating to the Non-Navigational Uses of International Watercourses, prepared during the 26th Sess. of the Int'l Law Comm'n*, U.N. Doc. A/CN.4/274 (1974). *See also* Okidi, *supra* note 27.

and led State actors and intergovernmental bodies to argue that there are principles of international law that can be applied to the preservation and environmental protection of international watercourses in the absence of bilateral and multilateral agreements.[29] In turn, the inclusion of certain rules and principles in the International Law Commission (ILC) Draft Articles, and subsequently in the Convention, must greatly enhance their status as established or emerging rules of general customary law, particularly in light of the ILC's function within the U.N. system and the cautious approach taken to its role of progressive development of international law, tempered by the constraints imposed by the reality of international State practice.[30]

In recent years, commentators have recognized the increasingly significant role that multilateral development banks (MDBs), such as the World Bank and the European Bank for Reconstruction and Development, and other development agencies can play in implementing sustainable development standards and principles.[31] Indeed, Günther Handl argues that MDBs are legally obliged, even though their charters may not include explicit environmental obligations or mandates, to act in accordance with international environmental norms possessing the status of customary international law or general principles of law.[32] He argues that this obligation may require not only avoiding lending to projects that may cause environmental harm, but also a more positive obligation "to act affirmatively toward realising the goals of sustainable development generally."[33] It is apparent that MDBs routinely employ procedures for environmental impact assessment of development proposals and influence the general economic policy of borrower States by providing assistance in the development of national environmental action plans and by other capacity-building measures. Indeed, by May 2006, more than 40 of the world's leading commercial banks had agreed to abide by the World Bank's voluntary code of ethical standards when making loans for infrastructure projects, particularly in

29. *See* Report of the U.N. Water Conference, Mar del Plata, Argentina, at 115, U.N. Doc. E/CONF.70/29 (1977). *See also* Okidi, *supra* note 27, at 159.

30. *See* Jutta Brunnée & Stephen J. Toope, *Environmental Security and Freshwater Resources: A Case for International Ecosystem Law*, 5 Y.B. INT'L ENVTL. L. 41, 58 (1994).

31. *See generally* GÜNTHER HANDL, MULTILATERAL DEVELOPMENT BANKING: ENVIRONMENTAL PRINCIPLES AND CONCEPTS REFLECTING GENERAL INTERNATIONAL LAW AND PUBLIC POLICY (2001); BENJAMIN J. RICHARDSON, ENVIRONMENTAL REGULATION THROUGH FINANCIAL ORGANISATIONS (2002); Alix Gowlland Gualtieri, *The Environmental Accountability of the World Bank to Non-State Actors: Insights from the Inspection Panel*, 72 BRIT. Y.B. INT'L L. 213, 213-15 (2001); Palitha T.B. Kohona, *Implementing Global Standards – The Emerging Role of the Non-State Sector*, 34 ENVTL. POL'Y & L. 260 (2004).

32. HANDL, *supra* note 31, at 13-19.

33. *Id.* at 31.

less developed countries.[34] These banks agreed to follow strict rules for lending to projects such as dams and oil pipelines that threaten the environment and local livelihoods.

Similarly, international trade law plays an increasingly active role in identifying and applying emerging rules of international environmental law in the course of international trade disputes.[35] For example, the World Trade Organisation (WTO) Appellate Body recently endorsed the concept of "sustainable development"[36] as a general objective of international law in the *Shrimp-Turtle* case,[37] while, in the *Beef Hormones* case,[38] it incorporated elements of the so-called "precautionary principle"[39] into the WTO Agreement[40] and thus into the very fabric of the international trading system.

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34. *See The Paper Industry: Trouble at Mill*, THE ECONOMIST, May 20, 2006, at 68. The International Finance Corporation, the private sector lending arm of the World Bank Group, developed the so-called "Equator Principles," *available at* http://www.ifc.org/equatorprinciples, which are applicable to project financing and have already been cited in the context of a number of disputes, including those concerning the Karahnjukar Power Plant in Iceland and the Baku-Tblisi-Ceyhan Pipeline Project. *See* Kohona, *supra* note 31.

35. *See generally* ENVIRONMENTAL JUSTICE AND MARKET MECHANISMS (Klaus Bosselman & Benjamin J. Richardson eds., 2001).

36. "Sustainable development" is commonly understood as "development that meets the need of the present without compromising the ability of future generations to meet their own needs." *See, e.g.*, UNITED NATIONS, BROCHURE ON JOHANNESBURG SUMMIT 2002: WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT, Aug. 26-Sept. 4, 2002, *available at* http://www.johannesburgsummit.org/html/brochure/brochure12.pdf. Detailed principles for the achievement of sustainable development were set down in the Rio Declaration adopted by the 1992 Conference on Environment and Development, including, inter alia, Principle 3, which provides, "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations." Report of the United Nations Conference on Environment and Development, Rio de Janeiro, June 3-14, 1992, U.N. Doc. A/CONF.151/26 (Vol. I) (Aug. 12, 1992), *available at* http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm [hereinafter Rio Declaration].

37. Appellate Body Report, *US-Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R (Oct. 12, 1998).

38. Appellate Body Report, *Measures Concerning Meat and Bone Products*, ¶¶ 120-25 (1998).

39. *See* Principle 15 of the Rio Declaration, *supra* note 36, which provides, "In order to protect the environment, the precautionary principle shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." *See* Rio Declaration, *supra* note 36.

40. *See* Agreement Establishing the Multilateral Trade Organization, Apr. 15, 1994, 33 I.L.M. 13 (1994), *available at* http://www.wto.org/english/docs_e/legal_e/ursum_e.htm# Agreement (last visited Mar. 24, 2006).

Conclusions Regarding Substantive Rules

It is widely accepted that there is an obligation to prevent transboundary harm by means of pollution. This obligation receives support from the vast majority of academic commentators[41] in judicial and arbitral statements,[42] in leading declarations and resolutions adopted by the international community,[43] in codifications of

41. *See* PATRICIA BIRNIE & ALAN BOYLE, INTERNATIONAL LAW AND THE ENVIRONMENT 104–05 (2002); Dupuy, *supra* note 3, at 63; ALEXANDRE KISS & DINAH SHELTON, INTERNATIONAL ENVIRONMENTAL LAW 130 (1991); PHILIPPE SANDS, PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW 190 (1995); EDITH BROWN WEISS ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 317 (1992); Sanford E. Gaines, *Taking Responsibility for Transboundary Environmental Effects*, 14 HASTINGS INT'L & COMP. L. REV. 781, 796–97 (1991); DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 345 (1998); David A. Wirth, *The Rio Declaration on Environment and Development: Two Steps Forward and One Back, or Vice Versa?*, 29 GA. L. REV. 599, 620 (1995); Rudiger Wolfrum, *Purposes and Principles of International Environmental Law*, 33 GER. Y.B. INT'L L. 308, 309 (1990). For a more sceptical view, see John H. Knox, *The Myth and Reality of Transboundary Environmental Impact Assessment*, 96 AM. J. INT'L L. 291, 293 (2002); Oliver Schachter, *The Emergence of International Environmental Law*, 44 J. INT'L AFFAIRS 457, 463 (1991); Bodansky, *supra* note 6, at 110–11.

42. *See Law of Non-Navigational Uses of International Watercourses*, 1974 U.N.Y.B. 194, 197 ¶ 1065, U.N. Doc. A/CN.4/SER.A/1974/Add.1 (Part 2); Lac Lanoux Arbitration (Spain v. Fr.), 12 R.I.A.A. 281 (Nov. 16, 1957); Corfu Channel, (U.K. v. Alb.), 1949 I.C.J. 4, 22 (Dec. 5); Trail Smelter Arbitration (U.S. v. Can.), 3 R.I.A.A. 1938, 1965 (1941) (though Bodansky is quick to point out that this decision is merely one of an arbitration panel and that "after more than fifty years [it] is still the only case in which a state was held internationally responsible for causing transboundary harm," *supra* note 6, at 114); *Case Concerning the Gabčíkovo-Nagymaros Project*, 1997 I.C.J. 7 (Sept. 25); *Advisory Opinion on the Legality or Threat of Use of Nuclear Weapons*, 35 I.L.R. 809, ¶ 29 (1996); *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in Nuclear Tests* (N.Z. v. Fr.), 1995 I.C.J. Pleadings 288 (Sept. 22, 1995). *See also* Charles B. Bourne, *The Case Concerning the Gabčíkovo-Nagymaros Project: An Important Milestone in International Water Law*, 8 Y.B. INT'L ENVTL L. 6 (1997); Owen McIntyre, *Environmental Protection of International Rivers, Case Analysis of the ICJ Judgment in the Case concerning the Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, 10 J. ENVTL L. 79, 79–91 (1998).

43. *See* Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm, Swed. June 5–16, 1972, U.N. Doc. A/CONF.48/14 (June 16, 1972), *reprinted in* 11 I.L.M. 1416 (1972) [hereinafter 1972 Stockholm Declaration]; G.A. Res. 3129 (XXVIII), U.N. GAOR, 28th Sess., Supp. No. 30A, U.N. Doc. A/9030/Add.1 (1973); G.A. Res. 3281 (XXIX), U.N. GAOR, 29th Sess., Supp. No. 31, U.N. Doc. A/9631 (Dec. 12, 1974), *reprinted in* 14 I.L.M. 251 (1974). 1974 OECD Recommendation on the Control of Eutrophication of Waters, OECD Council Recommendation C(74)220, *reprinted in* OECD, *OECD and the Environment* (1986), at 44–45; OECD Recommendation on Strategies for Specific Pollutants Control, OECD Council Recommendation C(74)221. OECD Recommendation on Transfrontier Pollution, OECD Council Recommendation C(74)224. Conference on Security and Co-operation in Europe, Helsinki, Fin., Aug. 1, 1975, *Final Act*, *reprinted in* 14 I.L.M. 1292 (1975). Principle 3 of the *1978 UNEP Principles of Conduct in the Field of the Environment Concerning Resources Shared by Two or More States*, UNEP/IG/12/2 (1978) (also known as *UNEP Principles on Conservation and Harmonious Utilization of Natural Resources*

international law adopted by intergovernmental agencies[44] and learned associations,[45] and in a number of normative environmental treaty regimes.[46] However, few who support the status of this obligation as a rule of customary international law would argue that it prohibits all transboundary harm.[47] This rule is subject to a number of considerable limitations, including the fact that the prohibition is normally understood to reflect an obligation as to performance, based on standards of "due diligence," rather than an absolute obligation as to result.[48] Also, it is clear that the duty to prevent harm by pollution is the primary or cardinal rule of customary international environmental law, despite the uncertainty of its precise normative content.

This duty to prevent harm has given rise to many, if not all, of the other relevant rules and principles and is significantly informed by the requirements of these other rules. For example, the duty to co-operate, though largely embodying procedural requirements to notify,

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Shared by Two or More States, reprinted in BASIC DOCUMENTS ON INTERNATIONAL LAW AND THE ENVIRONMENT 21 (P.W. Birnie & A.E. Boyle eds., 1995); Ass'n of SE Asian Nations, Agreement on the Conservation of Nature and Natural Resources, arts. 10, 11 (July 9, 1985), *at* http://www.aseansec.org/1490.htm; Rio Declaration, *supra* note 36, principle 2.

44. *See, e.g.*, Report of the International Law Commission, May 6-July 26, 1996; Report of the Working Group on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law, U.N. Doc. GAOR A/51/10(SUPP) (1996). *See also* Report of the International Law Commission, Apr. 23-June 1 & July 2-Aug. 10, 2001, Prevention of Transboundary Harm from Hazardous Activities, U.N. Doc. GAOR A/56/10 (2001); SUSTAINABLE DEVELOPMENT AND INTERNATIONAL LAW 61-85 (Alan Boyle & David Freestone eds., 1999) [hereinafter Report on Transboundary Harm]; The Secretary-General, Survey of State Practice Relevant to International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law, 97-99, U.N. Doc. A/CN/.4/394 (July 5, 1985).

45. For example, Article 3(1) of the International Law Association's Montreal Rules of International Law Applicable to Transfrontier Pollution, Int'l L. Ass'n, *Report of the 60th Conference* (1982), at 1-3.

46. *See* U.N. Convention on the Law of the Sea, Dec. 10, 1982, art. 194(2), 21 I.L.M. 1261 (entered into force Nov. 16, 1994). *See also* 1992 Espoo Convention on the Transboundary Effects of Industrial Accidents, art. 192(2), 31 I.L.M. 1333 (1992); Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, Fin., Feb. 25, 1991, 1989 U.N.T.S. 310 (1997), 30 I.L.M. 800 (1991) (entered into force Sept. 10, 1997); Convention on Biological Diversity, June 5, 1992, art. 3, 31 I.L.M. 822 (1992) (entered into force Dec. 29, 1993); Framework Convention on Climate Change, Preamble, 31 I.L.M. 851 (1992).

47. For an example of one of the very few commentators who continue to argue that the prohibition applies to all transboundary harm, see Gaines, *supra* note 41, at 796-97.

48. *See* Alan E. Boyle, *State Responsibility and International Liability for Injurious Consequences of Acts Not Prohibited by International Law: A Necessary Distinction?*, 39 INT'L & COMP. L.Q. 1, 14-15 (1990); Riccardo-Pisillo-Mazzeschi, *Forms of International Responsibility for Environmental Harm, in* INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM 15, 24 (Francesco Francioni & Tullio Scovazzi eds., 1991); Günther Handl, *National Uses of Transboundary Air Resources: The International Entitlement Issue Reconsidered*, 26 NAT. RESOURCES J. 405, 429 (1986).

exchange information, consult, and negotiate, is absolutely central to the discharge of the due diligence standards of the obligation to prevent harm. Equally, transboundary environmental impact assessment (EIA) is central to practical discharge of the duty to notify of planned projects and thus to effective co-operation. Patricia Birnie and Alan Boyle have noted that "without the benefit of an EIA the duty to notify and consult other states in cases of transboundary risk will in many cases be meaningless."[49] Though the 1997 U.N. Convention does not expressly require an EIA before the implementation of planned projects or activities that may have a significant effect, Phoebe Okowa suggests that "it is nevertheless arguable that even in those instances where no specific provision is made, environmental impact assessment may be taken to be implicit in other procedural duties, in particular the duty to notify other States of proposed activities that may entail transboundary harm."[50] Transboundary environmental impact assessment has also been linked to the general principle of non-discrimination,[51] as have dispute settlement procedures that give priority to private recourse by adversely affected individuals to domestic courts and remedies in the avoidance and resolution of disputes over international watercourses. Such procedures can also be seen to give effect to the polluter pays principle.

In turn, the precautionary principle can play a vital role by identifying when a transboundary EIA would be necessary and then comprehensively setting out all the environmental risks inherent in a planned project. The use of anticipatory EIA procedures is one of the key means to give practical effect to the more obscure precautionary principle.[52] Outside of formal EIA procedures, the precautionary

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49. BIRNIE & BOYLE, *supra* note 41, at 131. The same authors conclude that
> [t]he basic proposition that states must cooperate in avoiding adverse affects on their neighbours through a system of impact assessment, notification, consultation, and negotiation appears generally to be endorsed by the relevant jurisprudence, the declarations of international bodies, and the work of the ILC. Moreover, as the *Lac Lanoux* arbitration and the *Nuclear Tests* cases indicate, it also enjoys some support in state practice.

Id. at 126.

50. Phoebe N. Okowa, *Procedural Obligations in International Environmental Agreements*, 67 BRIT. Y.B. INT'L L. 275, 279 (1996).

51. Knox, *supra* note 41, at 293. Knox similarly concludes that "Principle 21 does seem logically to require...transboundary environmental impact assessment. Otherwise, the substantive prohibition on transboundary harm would be largely meaningless, except perhaps as a basis for *post hoc* determination of compensation owed to the affected state." *Id.* at 295-96.

52. In his separate opinion, Judge Weeramantry expressly describes EIA as "a specific application of the larger general principle of caution." Gabčíkovo-Nagymaros Project (Hung./Slovk.), 1997 I.C.J. 3, 113 (Feb. 5) (separate opinion of Judge Weeramantry). *See also*

principle plays a role in identifying general standards of due diligence for the purposes of the duty to prevent transboundary harm. For example, it is clear that duty of prevention would normally extend to a significant risk of transboundary environmental interference causing significant harm, thereby requiring precautionary risk assessment.[53] Obligations, of one form or another, relating to the application of clean production methods or the setting of precautionary environmental standards, techniques or practices are almost always associated with the application of the precautionary principle in international instruments.[54] In relation to the impact of the precautionary principle on other norms of international environmental law, Birnie and Boyle note that "the ILC special rapporteur is right to suggest that the precautionary principle is already included in the principles of prevention and prior authorization, and in environmental impact assessment, 'and could not be divorced therefrom.'"[55]

Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests Case (N.Z. v. Fr.), 1995 I.C.J. 288, 412 (Sept. 22) (dissenting opinion of Judge Palmer); *id.* at 343–46 (dissenting opinion of Judge Weeramantry).

53. *See, e.g.*, EXPERTS GROUP ON ENVTL. L. OF THE WORLD, COMM'N ON ENV'T & DEV., ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT: LEGAL PRINCIPLES AND RECOMMENDATIONS (1987), *reprinted in* ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT: LEGAL PRINCIPLES AND RECOMMENDATIONS ADOPTED BY THE EXPERTS GROUP ON ENVIRONMENTAL LAW OF THE WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT 75 (R.D. Munro & J.G. Lammers eds., 1986) [hereinafter EXPERTS GROUP RECOMMENDATIONS].

54. *See, e.g.*, Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes Within Africa, art. 4(3)(f), Jan. 30, 1991, 30 I.L.M 7730; Convention for the Protection of the Marine Environment of the North-East Atlantic, art. 2, app. I, Sept. 22, 1992, 32 I.L.M. 1069, *available at* http://www.ospar.org/eng/html/welcome.html; Convention on the Protection of the Marine Environment of the Baltic Sea, arts. 3(2), 3(3), Annex II, Apr. 9, 1992, 13 I.L.M. 546; Convention on Long-Range Transboundary Air Pollution, art. 6, Nov. 13, 1979, T.I.A.S. No. 10,541, 1302 U.N.T.S. 217; Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or Their Transboundary Fluxes, art. 2(2)(a), Oct 31, 1988, 2001 U.N.T.S. 287; Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes, art. 3(3), Nov. 18, 1991, 2001 U.N.T.S. 187; 1991 UNGA Res. 46/215 on Large-Scale Pelagic Drift-Net Fishing and its Impact on the Living Marine Resources of the World's Oceans and Seas; Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, art. 5(e), U.N. Doc. A/CONF.164/37 (Sept. 8, 1995).

55. BIRNIE & BOYLE, *supra* note 41, at 120 (citing Report of the International Law Commission, ¶ 716, May 1-June 9 & July 10-Aug. 18, 2000, U.N. Doc. GAOR A/55/10 (SUPP)).

Another increasingly important application of the precautionary principle is that of the ecosystems approach to natural resources management. This application is by no means required under customary international law, yet it is employed with increasing frequency in watercourse conventions. Further, it would appear that a precautionary approach is taken to the task of identifying "a grave and imminent peril" for the purposes of establishing the existence of a state of "necessity" under draft Article 33 of the International Law Commission's 1996 draft Articles on Responsibility of States for Internationally Wrongful Acts.[56] The Special Rapporteur's second report suggests that a measure of scientific uncertainty about the prospect of damage should not disqualify a State from invoking necessity.[57]

The universally accepted notion of sustainable development has particular significance for the recent and future development of norms and principles of international environmental law. It has been described as "an umbrella notion encompassing a range of more specific principles that give it effect,"[58] including EIA, access to information and participation in environmental decision making, the precautionary principle,[59] inter-generational equity, intra-generational equity, and the ecosystems approach. More importantly, it facilitates the reconciliation of international law on protection of the environment and on the utilisation of shared resources. This approach takes into account both environmental and non-environmental considerations, including social, economic, and developmental goals.

Indeed, leading commentators suggest that the reference to States' "own environmental *and developmental* policies" included in Principle 2 of the Rio Declaration,[60] which effectively restates the duty to prevent transboundary environmental harm as earlier articulated in Principle 21 of the Stockholm Declaration, does no more than "confirm

56. International Law Commission's 1996 draft Articles on Responsibility of States for Internationally Wrongful Acts, *available at* http://untreaty.un.org/ilc/texts/instruments/english/commentaries/9_6_2001.pdf. Similarly, in the Gab□ikovo-*Nagymaros* case, the ICJ strongly suggests that environmental concerns are likely to be relevant in determining the essential interests of States for the purposes of invoking a state of "necessity." Gab□ikovo-Nagymaros Project (Hung./Slovk.), 1997 I.C.J. 3, ¶¶ 44, 49–58 (Feb. 5).

57. James Crawford, *Second Report on State Responsibility*, ¶ 289, U.N. Doc. A/CN.4/498/Add.2, Apr. 30, 1999.

58. Brunnée & Toope, *supra* note 30, at 66.

59. For example, Trouwborst suggests that the endorsement of the goal of sustainable development in Article 5 of the 1997 Watercourses Convention automatically implies a recognition of the precautionary principle, as the latter is so firmly linked to the former. *See* ARIE TROUWBORST, EVOLUTION AND STATUS OF THE PRECAUTIONARY PRINCIPLE IN INTERNATIONAL LAW 111 (2003).

60. Rio Declaration, *supra* note 36, principle 2 (emphasis added).

an existing and necessary reconciliation with the principle of sustainable development and the sovereignty of states over their own natural resources."[61] The duty of prevention has also been linked implicitly to the notion of sustainable development by a proposal contained in the International Law Commission's 2001 draft Convention on the Prevention of Transboundary Harm from Hazardous Activities.[62] The draft proposes that States potentially in dispute over the prevention of transboundary harm must negotiate an equitable balancing of interests in accordance with a range of relevant factors, much like watercourse States must establish an equitable regime for the utilisation of shared freshwater resources under the principle of equitable utilisation. Indeed, in the specific context of shared freshwater resources, the principle of equitable and reasonable utilisation, the predominant normative concept of international freshwater law, approximates with and "operationalises" the notion of sustainable development.[63] The principle of equitable utilisation as articulated in Article 5 of the 1997 U.N. Convention requires watercourse States to achieve an equitable balancing of interests in accordance with a non-exhaustive list of factors, including environmental and non-environmental considerations, set out in Article 6.[64] Therefore, in relation to shared freshwater resources, sustainable development facilitates the thorough consideration of the various aspects of environmental protection in the determination of an equitable regime for the utilisation of the resource. In other words, it involves the use of the waters on the basis of a regime of equitable utilisation, which takes full account of the environmental protection of the shared resource. Such a regime might more appropriately be called one of "equitable and sustainable utilisation."

As noted above, the principle of intergenerational equity, involving a balancing of interests between present and future generations, is at the normative core of the notion of sustainable development.[65] In her seminal work on this principle, Edith Brown Weiss

61. BIRNIE & BOYLE, *supra* note 41, at 110.

62. Report on Transboundary Harm, *supra* note 44.

63. *Id.* pmbl. Patricia K. Wouters & Alistair S. Rieu-Clarke, *The Role of International Water Law in Promoting Sustainable Development*, 12 WATER L. 281, 283 (2001). *See also* Marjon Kroes, *The Protection of International Watercourses as Sources of Fresh Water in the Interest of Future Generations*, *in* THE SCARCITY OF WATER: EMERGING LEGAL AND POLICY RESPONSES 83 (Edward H.P. Brans et al. eds., 1997); McIntyre, *supra* note 42, at 88.

64. U.N. Convention, *supra* note 1.

65. *See* Rio Declaration, *supra* note 36, principle 3 (referring to the requirement "to equitably meet developmental and environmental needs of present and future generations").

identifies five key duties of resource use and corresponding rights[66] that, as Catherine Redgwell points out, "bear a strong resemblance to existing general principles of international environmental law. It is not surprising then that examples of each 'duty of use' may be found in existing treaties in the environmental law field, as well as in emerging principles of customary law."[67] Clearly, the precautionary principle has a role to play in achieving a balance of interests between present and future generations. According to Redgwell, the principle generally provides that "where there is a threat to the global environment, yet scientific uncertainties persist, steps can and should be taken that will benefit the present generation in any event and mitigate suspected adverse impacts upon future generations."[68]

Similarly, the principle of common but differentiated responsibility, which recognises the varying culpability and capabilities of developed and developing States,[69] stands as another core component of sustainable development. This principle plays a role in identifying the due diligence standards that might be expected of particular States under the duty to prevent transboundary harm. Indeed, the general obligation to exercise due diligence in preventing or mitigating adverse transboundary effects has, for many years, taken account of the differing capabilities of States. For example, Article 2 of the 1972 London Dumping Convention[70] requires the parties to take effective measures "according to their scientific, technical and economic capabilities...."

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66. Key duties are the following:
(i) to conserve resources;
(ii) to ensure equitable use;
(iii) to avoid adverse impacts;
(iv) to prevent disasters, minimise damage and provide emergency assistance;
(v) to compensate for environmental harm.

EDITH BROWN WEISS, IN FAIRNESS TO FUTURE GENERATIONS: INTERNATIONAL LAW, COMMON PATRIMONY, AND INTERGENERATIONAL EQUITY 50 (1989).

67. CATHERINE REDGWELL, INTERGENERATIONAL TRUSTS AND ENVIRONMENTAL PROTECTION 81 (1999) (citation omitted).

68. *Id.* at 139.

69. Principle 7 of the Rio Declaration, *supra* note 36, provides:
> States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.

70. Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, Aug. 30, 1975, 11 I.L.M. 1291, 1295.

Common but differentiated responsibility may also impact to modify application of the precautionary principle, as is acknowledged in Principle 15 of the Rio Declaration.[71]

As the preceding discussion demonstrates, the normative status and substantive content of both more established and emerging rules and principles of international environmental law, and their application to shared international freshwater resources, is far from simple. It is clear, however, that customary and conventional rules and principles are closely interrelated. The consistent articulation of certain rules in conventional regimes lends support to the argument that such rules have achieved the status of customary international law. Established and even emerging customary rules and principles significantly influence the application of conventional regimes. Considering the work of the International Law Commission and many other intergovernmental agencies and learned associations involved in the formulation of international environmental law and policy, it is possible to argue that most generally applicable conventional and declaratory instruments relating to the environment consist of little more than codifications of existing custom or established State practice. Of course, once particular rules or principles have been included in such codifying instruments, their customary status is likely to be greatly enhanced. Moreover, the rules or principles of international environmental law identified above, whether customary or conventional in origin, are themselves closely interrelated, having some significance for the normative status or practical application of one or more of the others.

There are several areas of international law for which there is strong support for a legal obligation to negotiate an equitable solution. These include the law of high seas fisheries[72] and the law relating to maritime boundary delimitation.[73] With regard to these areas, it is reasonable for commentators to question whether transboundary environmental relations are more appropriately based on equitable balancing than on legal rules with greater certainty and predictability.[74] However, the principle of equitable utilisation has long been the

71. Rio Declaration, *supra* note 36, principle 15 ("In order to protect the environment, the precautionary approach shall be widely applied by States *according to their capabilities.* Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." (emphasis added)).

72. Icelandic Fisheries (U.K. of Gr. Brit. & N. Ir. v. Ice.), 1974 I.C.J. 3 (July 25); Icelandic Fisheries Cases (F.R.G. v. Ice.) 1974 I.C.J. 175 (July 25).

73. Northern Sea Shelf Continental (F.R.G. v. Den. & F.R.G. v. Neth.), 1969 I.C.J. 3 (Feb. 20).

74. BIRNIE & BOYLE, *supra* note 41, at 129-30.

uncontested cornerstone of the law of international watercourses. Thus, it is appropriate to consider factors pertaining to environmental protection under the framework of equitable utilisation. Of course, States remain free to enter into whatever binding conventional environmental arrangements they deem necessary.

The question remains, therefore, how much weight should be given to environmental factors in the course of such a balancing of interests and the processes by which they can be incorporated into an equitable regime for the utilisation of shared freshwater resources? In this regard, the author suggests that the growing corpus of broadly supported environmental rules and principles alluded to above emphasises the likely significance of environmental factors in this process and provides detailed mechanisms and procedures by means of which environmental considerations can be taken on board and environmental damage can thus be prevented or mitigated. Arguably, the extensive elaboration and detailed articulation of environmental rules and principles in recent years, both of substantive elements such as the due diligence standards required and of procedural obligations such as the duty to notify, significantly enhances the weight accorded to environmental considerations in the determination of an equitable regime for the utilisation of an international watercourse.

III. PROCEDURAL RULES OF INTERNATIONAL ENVIRONMENTAL LAW

Accepting the proposition that the applicable customary rules for the use of shared freshwater resources require that significant harm to other watercourse States should be avoided and that such use must be equitable and reasonable, it follows that a State will need to know the current or proposed uses of a neighbouring State. With this knowledge, a State may ascertain whether any use will cause significant harm within its territory or to the shared water resource or whether such use will be equitable and reasonable. In addition to a notification procedure, other legal machinery is required by which watercourse States may consult and negotiate in respect of proposed works or utilisation of shared waters. Okowa points out the proliferation, since the 1972 U.N. Conference on the Human Environment,[75] "of treaty instruments requiring States not so much to prevent environmental harm as to

75. *See generally* The United Nations Conference on the Human Environment, adopted in Stockholm, Swed. June 15-16, 1972, *Declaration of the United Nations Conference on the Human Environment*, U.N. Doc. A/CONF.48/14, *reprinted in* 11 I.L.M. 1416 (1972).

observe a number of discrete procedures before permitting the conduct of activities which may cause such harm."[76] She further observes that,

> [b]ecause these obligations are designed to reconcile the interests of States proposing the conduct of activities and those likely to be affected, one recurrent theme in all these obligations is an attempt to ensure that, while some protection is given to putative victims, the sovereignty of the source State is also not unduly impeded in the process.[77]

Generally, procedural obligations provide a framework for the early and amicable resolution of environmental disputes by ensuring that interested parties are adequately informed of proposed projects and their potential environmental implications. This provides a form of procedural due process for the participation of interested parties, including, where appropriate, the citizens of the State of origin and the citizens of potentially affected States.[78] The process also provides an opportunity for compromise to be reached, involving, for example, alteration of the original proposal or the inclusion of remedial measures to mitigate any likely adverse environmental effects.[79] Many commentators would, quite correctly, count the device of transboundary EIA among such legal procedures.[80] However, the author takes the view that it is so intrinsically linked to the discharge and implementation of several core substantive obligations and principles of international environmental law, including the obligation to prevent transboundary harm and the precautionary principle, that it is more apt to examine EIA

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76. Okowa, *supra* note 50, at 275. *See generally* FREDERIC L. KIRGIS, JR., PRIOR CONSULTATION IN INTERNATIONAL LAW: A STUDY OF STATE PRACTICE (1983); SANDS, *supra* note 41, ch. 16, at 596; Alan E. Boyle, *The Principle of Co-operation: The Environment, in* THE UNITED NATIONS AND THE PRINCIPLE OF INTERNATIONAL LAW, 120 (Vaughn Lowe & Colin Warbrick eds., 1994).

77. Okowa, *supra* note 50, at 276.

78. In the context of transboundary water resources, see, e.g., United Nations: Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Helsinki, Fin., March 17, 1992, *Text of Convention, Part II: Provisions Relating to Riparian Parties, Art. 16: Public Information,* ¶¶ 1-2, *reprinted in* 31 I.L.M. 1312 (1992) (requiring that all "Riparian Parties" make available to the public the following information:

(a) Water-quality objectives;

(b) Permits issued and conditions required to be met;

(c) Results of water and effluent sampling carried out for the purposes of monitoring and assessment, as well as results of checking compliance with the water quality objectives or the permit conditions.)

79. *See* Okowa, *supra* note 50, at 277-78.

80. *Id.* (including Okowa).

alongside such substantive rules. This is not to deny the central role of EIA in ensuring that States likely to be affected by an activity are appropriately informed of its potential impacts and in facilitating meaningful consultation and negotiation between proposing and opposing States.

The existence of a general customary obligation on States to co-operate in respect to the development and utilisation of international watercourses was suggested in the *Lac Lanoux Arbitration*:

> States are today perfectly conscious of the importance of the conflicting interests brought into play by the industrial use of international rivers, and of the necessity to reconcile them by mutual concessions. The only way to arrive at such compromises of interests is to conclude agreements on an increasingly comprehensive basis....There would thus appear to be an obligation to accept in good faith all communications and contacts which could, by a broad comparison of interests and by reciprocal good will, provide States with the best conditions for concluding agreements.[81]

The International Court of Justice emphasised the necessity of co-operation among watercourse States in the recent *Gab□íkovo-Nagymaros* case, stating, for example, that "only by international cooperation could action be taken to alleviate...problems [of navigation, flood control, and environmental protection]."[82]

However, in the course of their discussions on the subject of international watercourses, members of the International Law Commission differed on whether the need for States to co-operate was a mere aspiration or a binding legal duty. For example, Carlos Calero Rodriguez argued that "cooperation was a goal, a guideline for conduct, but not a strict legal obligation which, if violated, would entail international responsibility."[83] On the other hand, Bernhard Graefrath insisted that "cooperation was not simply a lofty principle, but a legal duty."[84] However, despite disagreement over the precise legal status of the duty to co-operate per se, most agreed that it was an "umbrella term,

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81. Lac Lanoux Arbitration (Spain v. Fr.), 12 R.I.A.A. 281, 308 (1957). *See also* C.B. Bourne, *Procedure in the Development of International Drainage Basins: The Duty to Consult and to Negotiate, in* 1972 CAN. Y.B. INT'L L. 219.

82. Gabčíkovo-Nagymaros Project (Hung. v. Slovk.), 1997 I.C.J. 7 (Sept. 25).

83. *Law of the Non-Navigational Uses of International Watercourses*, 1 Y.B. INT'L L. COMM'N 69, 71 (1987), U.N. Doc. A/CN.4/SERA/1987. *See* STEPHEN C. MCCAFFREY, THE LAW OF INTERNATIONAL WATERCOURSES 401 (2001).

84. *Law of the Non-Navigational Uses of International Watercourses, supra* note 83, at 85.

embracing a complex of more specific obligations which, by and large, do reflect customary international law."[85] For example, Paul Reuter concluded that "the obligation to cooperate was a kind of label for an entire range of obligations."[86] Philippe Sands takes a similar view and explains that the obligation to cooperate has "been translated into more specific commitments," including "rules on environmental impact assessment...; rules ensuring that neighbouring states receive necessary information (requiring information exchange, consultation and notification)...; the provision of emergency information...; and trans-boundary enforcement of environmental standards."[87] Despite the misgivings of some of its members about the precise legal nature and status of the obligation to co-operate, the International Law Commission eventually decided to include an express reference to this duty in its 1994 Draft Articles.[88] This reference formed the basis of Article 8 of the 1997 U.N. Watercourses Convention,[89] which recognises the practical importance of the duty to co-operate for the attainment of the twin goals of optimal utilisation and adequate protection of an international watercourse.[90] Article 8 also stresses the role of joint mechanisms or commissions in facilitating such co-operation.[91] The Convention includes further detailed requirements that give practical effect to the rather vague obligation to co-operate, including the obligations to notify, consult and negotiate, exchange information, and participate in dispute settlement procedures.[92]

The general principle requiring notice and consideration of the transboundary environmental impact of national activities is based on the informed self-interest of nations and has long received broad international support. For example, Principle 8 of the Draft Declaration of the Preparatory Committee for the 1972 U.N. Conference on the Human Environment provided that "a State having reason to believe

85. MCCAFFREY, *supra* note 83, at 401.

86. *Law of the Non-Navigational Uses of International Watercourses*, *supra* note 83, at 75.

87. SANDS, *supra* note 41, at 197-98.

88. *Report of the International Law Commission*, 2 Y.B. INT'L L. COMM'N, pt. 2, 88, 105 (1994).

89. U.N. Convention, *supra* note 1.

90. *Id.* art. 8(1) (providing that "[w]atercourse States shall cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilization and adequate protection of an international watercourse").

91. *Id.* art. 8(2) (providing that, [i]n determining the manner of such cooperation, watercourse States may consider the establishment of joint mechanisms or commissions, as deemed necessary by them, to facilitate cooperation on relevant measures and procedures in the light of experience gained through cooperation in existing joint mechanisms and commissions in various regions).

92. *Id.* at 707-10, 713-14 (arts. 9, 11-19, 33).

that the activities of another State may cause damage to its environment or to the environment of areas beyond the limits of national jurisdiction may request international consultations concerning the envisaged activities."[93] Principle 20 of the Draft Declaration further required that "[r]elevant information must be supplied by States on activities or developments within their jurisdiction or under their control whenever they believe, or have reason to believe, that such information is needed to avoid the risk of significant adverse effects on the environment in areas beyond their national jurisdiction."[94]

Though Principle 20 was not adopted at Stockholm, due principally to Brazilian opposition,[95] the concept received broad support. In fact, the U.N. General Assembly subsequently adopted, by a vote of 115 to 0 with 10 abstentions, a resolution specifically addressing the issue of notice of activities having potential for transboundary environmental harm in which the General Assembly resolved that it

> [r]ecognizes that cooperation between States in the field of the environment ... will be effectively achieved if official and public knowledge is provided of the technical data relating to the work to be carried out by States within their national jurisdiction with a view to avoiding significant harm that may occur in the human environment of the adjacent area

and that "[t]he technical data referred to...will be given and received in the best spirit of cooperation and good neighbourliness...."[96]

In relation to international water resources in particular, U.S. practice in this area provides an early and highly developed example of notice and consultation provisions applying in relation to water pollution having international dimensions. The Federal Water Pollution Act of 1956 required that where there was

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93. See 1972 Conference on the Human Environment, June 5-16, 1972, Stockholm, Swed., *Draft Declaration of the Preparatory Committee*, U.N. Doc A/CONF.48/PC.6; U.N. Doc A/ CONF.48/PC.9 and Corr.1, U.N. A/CONF.48/PC.13 and Corr.1, and U.N. Doc A/CONF.48/PC.17 (reports of the sessions of the Preparatory Committee) (the Declaration is also included in the UNEP account of the Constitution of the Conference, *available at* http://www.unep.org/Documents.Multilingual/default.asp?DocumentID=97&ArticleID=1496&l=en).

94. *Id.*

95. Apparently, Brazilian opposition was due to the fact that Brazil was planning to build three high dams on the Parana River, which is an important source of water for downstream Argentina. *See* Albert E. Utton, *International Environmental Law and Consultation Mechanisms*, 12 COLUM. J. TRANSNAT'L L. 56, 71-72 n.76 (1973).

96. UNGA Resolution 2995, Dec. 15, 1972, *reprinted in* 68 DEP'T OF STATE BULL. 56-57 (1973).

> reason to believe that any pollution (of interstate or navigable waters) which endangers the health or welfare of persons in a foreign country is occurring...[t]he Secretary [of the Interior], through the Secretary of State, shall invite the foreign country which may be adversely affected by the pollution to attend and participate in the conference, and the representative of such country shall, for the purposes of the conference, have all the rights of a State water pollution control agency.[97]

Okowa points out that, prior to the 1972 Stockholm process, the inclusion of such procedural obligations was especially common in early treaties concerned with regulating the conduct of States in relation to international watercourses.[98] Describing the significance of procedural rules relating to international water law in 1977, Oscar Schachter succinctly explained the reason for this significance and the nature of the relationship between procedural obligations and the malleable cardinal water law principle of equitable utilisation:

> It is reasonable...that procedural requirements should be regarded as essential to the equitable sharing of water resources. They have particular importance because of the breadth and flexibility of the formulae for equitable use and appropriation. In the absence of hard and precise rules for allocation, there is a relatively greater need for specifying requirements for advance notice, consultation, and decision procedures. Such requirements are, in fact, commonly found in agreements by neighbouring States concerning common lakes and rivers.[99]

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97. 33 U.S.C. § 466g(d)(2) (1970), *reprinted in* Utton, *supra* note 95, at 65–66.

98. Okowa, *supra* note 50, at 275, 275 n.2 (citing the following early treaties: "General Convention of 14 December 1931 between Romania and Yugoslavia concerning the Hydraulic System, *League of Nations Treaty Series*, vol. 135, p.31; Agreement of 10 April 1922 for the Settlement of Questions Relating to Watercourses and Dykes on the German-Danish Frontier, *League of Nations Treaty Series*, vol.10, p.201; Treaty of 24 February 1950 between Hungary and the USSR concerning the Regime of Soviet-Hungarian State Frontier, United Nations, *Legislative Texts and Treaty Provisions concerning the Utilization of International Rivers for other Purposes than Navigation* (hereinafter *Legislative Texts*), p. 823, No. 266...Treaty of 11 January 1909 between Great Britain and the United States of America relating to Boundary Waters and Questions concerning the Boundary between Canada and the United States, *Legislative Texts*, p. 260, No. 79; Convention of 11 May 1929 between Norway and Sweden on Certain Questions relating to the Law on Watercourses, *League of Nations Treaty Series*, vol.120, p. 263").

99. MCCAFFREY, *supra* note 83, at 398 (quoting OSCAR SCHACHTER, SHARING THE WORLD'S RESOURCES 69 (1977)).

More recently, the U.N. Economic Commission for Europe (ECE) 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes imposes upon parties a range of procedural obligations relating to, inter alia, the exchange of information on existing and planned uses of shared waters, participation in consultations, and the provision of warnings.[100] Similarly, the 1997 U.N. Watercourses Convention contains detailed procedural provisions.[101]

Likewise, in 1973, Utton concluded that "a general principle of limited territorial sovereignty or neighborliness already requires nations to consider the environmental impact of their activities on other nations," but "the institutional machinery to implement such consideration is wholly inadequate. The elaboration of procedures and the development of appropriate fora for the consideration of activities that have the potential for environmental harm is yet to be accomplished."[102]

Most leading contemporary commentators shared this view.[103] In the context of shared freshwater resources, however, Charles Bourne argued that the requirement of reasonableness inherent in the Helsinki Rules requires prior notice of uses of international watercourses that might have significant environmental impacts on other watercourse States and involvement of such States at the planning stage rather than after the damage has occurred.[104] Furthermore, he usefully elaborated detailed procedural rules for involving potentially affected watercourse States:

> First, a state must give co-basin states prior notice of works or utilizations that might cause them serious injury. ...Second, a state wishing to undertake a work or utilization that might cause serious injury to co-basin states must give them sufficient information about it so that they

100. Convention on the Protection and Use of Transboundary Watercourses and International Lakes, *supra* note 78. By the end of 2000, the Convention had 26 Signatories and 33 Parties, 1936 U.N.T.S. 269, *available at* http://untreaty.un.org/ENGLISH/bible/englishinternetbible/partI/chapterXXVII/treaty27.asp. *See generally* ANDRÉ NOLLKAEMPER, THE LEGAL REGIME FOR TRANSBOUNDARY WATER POLLUTION: BETWEEN DISCRETION AND CONSTRAINT (1993).

101. U.N. Convention, *supra* note 1, arts. 8, 9, 11-18.

102. Utton, *supra* note 95, at 59.

103. *See generally* L.F.E. GOLDIE, *Development of an International Environmental Law – An Appraisal, in* LAW, INSTITUTIONS AND THE GLOBAL ENVIRONMENT 104, 129 (John Lawrence Hargrove ed., 1972); A.P. Lester, *River Pollution in International Law*, 57 AM. J. INT'L L. 828, 833 (1963).

104. C.B. Bourne, *International Law and Pollution of International Rivers and Lakes*, 6 U. BRIT. COLUM. L. REV. 115, 121 (1971).

> may appreciate the true nature of the proposed work or utilization. Third, a state is under an obligation to consult and to negotiate in good faith with co-basin states that object to a proposed work or utilization of waters on the ground that it will adversely affect them. Fourth, a state is under an obligation to suspend the undertaking of a work or utilization of waters until notice and information about it has been given to co-basin states and a reply received or, in the absence of a reply, a reasonable time has passed, and, if objection is raised by a co-basin state, until negotiations have taken place for a reasonable time without success or until reasonable attempts to negotiate have been made without result.[105]

Professor Bourne's recommendations now appear prophetic considering the procedural rules eventually adopted under the 1997 Convention and recent developments in customary international law.

Conclusions Regarding Procedural Rules

It is worth noting that the International Law Commission's 2001 draft Convention on the Prevention of Transboundary Harm from Hazardous Activities,[106] in addition to confirming the general obligation to prevent transboundary harm, codifies existing related international obligations relating to environmental impact assessment, notification, consultation,[107] monitoring, and diligent control of activities likely to cause such harm. These related procedural obligations operate to discharge the more general duty of States to co-operate in the reasonable and equitable utilisation of international watercourses. Commentators agree that the duty to provide neighbouring States with prior notice of plans to exploit a shared natural resource is an obligatory requirement under customary international law[108] or "a generally recognised

105. *Id.* at 122.

106. *See generally* Report on Transboundary Harm, *supra* note 44.

107. In the light of arbitral and judicial guidance, Nollkaemper has defined the duty to consult to mean that the State in question "has to engage in an exchange of views with potentially affected states so as to make the consideration of their interests a component in its final determination." NOLLKAEMPER, *supra* note 100, at 165.

108. *See generally* J. de Arechaga, *International Law in the Past Third of a Century*, 1 RECUEIL DES COURS DE L'ACADEMIE DE DROIT INTERNATIONAL 198 (1978); KIRGIS, *supra* note 76, at 86, 128; U.N. Econ. Soc. Council [ECOSOC], *Affairs, Management of International Water Resources: Institutional and Legal Aspects*, 50–51, U.N. Doc. ST/ESA/5 (1975).

principle of international environmental law."[109] Several States have sought to rely on the duty to provide prior notification in the course of international disputes.[110] The obligation certainly receives broad support in important recent conventional[111] and declaratory instruments.[112] In addition, Okowa asserts that, even where it is not expressly provided for, the obligation to notify "must be taken as implicit in any requirement to conduct environmental impact assessment," as such assessments are required with a view to protecting the interests of third States.[113]

There is potential for uncertainty as to which States are likely to be affected by a particular activity and consequently entitled to notification, or as to which types of activities and forms of injuries the State of origin must notify to the potentially affected States. However, both the precautionary principle and the more inclusive ecosystems approach might function to address these questions. Article 12 of the 1997 U.N. Convention acknowledges the link between effective notification and transboundary EIA by expressly requiring that the results of any EIA accompany the notification. The duty to notify may be facilitated by institutional machinery and the widely adopted 1992 ECE Convention requires Parties to enter into bilateral or multilateral agreements or other arrangements that provide for the establishment of joint bodies to have responsibility for, inter alia, "the exchange of information on existing and planned uses of water and related installations that are likely to cause transboundary impact"[114] and to "participate in the implementation of environmental impact assessments relating to transboundary waters, in accordance with appropriate

109. *See* Johan G. Lammers, *The Present State of Research Carried Out by the English-Speaking Section of the Centre for Studies and Research, in* TRANSFRONTIER POLLUTION AND INTERNATIONAL LAW 110 (Hague Academy of International Law: Center for Studies and Research in International Law and International Relations ed., 1985).

110. *See generally* Lac Lanoux Arbitration (Spain v. Fr.), 12 R.I.A.A. 281, 308 (1957); MCCAFFREY, *supra* note 83, at 265–67 (Itaipú Dam), 233–47 (Aswan Dam).

111. *See generally* 1992 Espoo Convention on the Transboundary Effects of Industrial Accidents, *supra* note 46, arts. 3, 10.

112. *See* 1972 Stockholm Declaration, *supra* note 43, recommendation 51(b)(i) ("[W]hen major water resource activities are contemplated that may have a significant environmental effect on another country, the other country should be notified well in advance of the activity envisaged.").

113. Okowa, *supra* note 50, at 289. However, the Convention on Environmental Impact Assessment in a Transboundary Context (1991) expressly includes the obligation to notify under Article 3; Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, Fin., Feb. 25, 1991, *Notification*, 30 I.L.M. 802, 804, *available at* http://www.unece.org/env/eia/documents/conventiontextenglish.pdf.

114. Convention on the Protection and Use of Transboundary Watercourses and International Lakes, *supra* note 78, art. 9(2)(h).

international regulations."[115] In a rare example of a treaty instrument expressly taking a broader, more ecosystems oriented approach to international co-operation, Article 9 also provides for the involvement of non-riparian States "directly and significantly affected by transboundary impact...in the activities of multilateral joint bodies established by Parties riparian to such transboundary waters."[116] The joint bodies that Parties are required to establish shall have among their tasks "to participate in the implementation of environmental impact assessments relating to transboundary waters, in accordance with appropriate international regulations."[117] Article 13 of the 1997 U.N. Convention provides that, unless otherwise agreed, the notifying State shall allow notified States a period of six months within which to study and evaluate the measures and to communicate their findings.[118] However, this period must be extended for a further six months at the request of a notified State "for which the evaluation of the planned measures poses special difficulty."[119] This provision may be a reference to the emerging international environmental law principle of "common but differentiated responsibility."

Other related obligations under the duty to co-operate include the duty to negotiate in good faith,[120] the duty to warn, and duties relating to more general and regular exchange of information. According to Okowa, "Almost all the treaty instruments on environmental protection provide for the exchange of information on a regular basis."[121] McCaffrey perceives this obligation as "a necessary adjunct to, or perhaps even an integral part of, the obligations of equitable utilization and prevention of significant harm."[122] Similarly, the Experts Group on Environmental Law of the World Commission on Environment and

115. *Id.* art. 9(2)(j).
116. *Id.* art. 9(3).
117. *Id.* art. 9(2)(j).
118. U.N. Convention, *supra* note 1, at 708.
119. *Id.*
120. Negotiations would not be so conducted where one party terminates the negotiations without justification, imposes abnormal delays or time limits, fails to adhere to the agreed procedure, or systematically refuses to consider the proposals or the interests of the other party. *See* Lac Lanoux Arbitration (Spain v. Fr.), 12 R.I.A.A. 281, 307 (1957).
121. Okowa, *supra* note 50, at 300 (citation omitted).
122. MCCAFFREY, *supra* note 83, at 411. He goes on to explain that,
> without data and information from co-riparian states concerning the condition of the watercourse, it will be very difficult, if not impossible, for a state not only to regulate uses and provide protection (*e.g.*, against floods and pollution) within its territory, but also to ensure that its utilization is equitable and reasonable vis-à-vis other states sharing the watercourse.

Id.

Development linked the obligation closely to the principle of equitable utilisation, stating that "the duty to provide information may in principle pertain to many factors...which may have to be taken into account in order to arrive at a reasonable and equitable use of a transboundary natural resource."[123] Though determination of breach of such an obligation is bound to be problematic in the absence of uniform principles or rules regulating the collection or dissemination of information, Okowa speculates that, "should damage occur, failure to supply such information may be taken as evidence that the State on whom the duty is incumbent has not exercised due diligence over activities under its jurisdiction and control."[124] This duty is most effectively discharged through the establishment of permanent river basin institutions to facilitate common management of the shared water resources. Indeed, Dupuy concludes that the regular exchange of information by means of such permanent regional institutions "seems to be the most appropriate way of establishing a reasonable and equitable use of shared natural resources, *as is required by international law.*"[125]

Procedural obligations appear to play a particularly significant role in relation to regimes for the protection of water or other shared natural resources. It is therefore widely accepted that, despite the lack of a similar customary requirement in relation to environmental obligations generally, customary law in the context of shared water resources imposes a binding obligation to notify other States, supply information, and enter into consultations.[126] Early support for the existence of these customary obligations can be found in a long line of European[127] and other[128] treaties and State practices[129] on the utilisation of international

123. EXPERTS GROUP RECOMMENDATIONS, *supra* note 53, at 95 (Art. 10: Prevention and Abatement of a Transboundary Environmental Interference).

124. Okowa, *supra* note 50, at 301.

125. Dupuy, *supra* note 3, at 73 (emphasis added).

126. *See* J. BRUHACS, THE LAW OF NON-NAVIGATIONAL USES OF INTERNATIONAL WATERCOURSES 176-77 (M. Zehery trans., 1993).

127. *See* Convention on the Regime of Navigable Waterways of International Concern, Apr. 20, 1921, 7 L.N.T.S. 35; Convention Regarding the Regime of Navigation on the Danube, Aug. 18, 1948, 33 U.N.T.S. 197; Agreement on the International Commission for the Protection of the Rhine Against Pollution, Apr. 23, 1963, 994 U.N.T.S. 3; Agreement Concerning the Use of Water Resources in Frontier Waters, Pol.-U.S.S.R., July 17, 1964, 552 U.N.T.S. 175; Agreement concerning Co-operation in Water Economy Questions in Frontier Rivers, art. 9, F.R.G-Czech Rep., 1974; Convention on the Protection of the Rhine Against Chemical Pollution, Dec. 3, 1976, 16 I.L.M. 242 (1977). For an extensive survey, see KIRGIS, *supra* note 76, ch. 2.

128. *See* Okowa, *supra* note 50, at 275 & n.2 (citing Boundary Waters Treaty, art. IX); Agreement for the Full Utilization of the Nile Waters, U.A.R.-Sudan, Nov. 8, 1959, 453 U.N.T.S. 51; Indus Waters Treaty, India-Pak., art. IV, Sept. 19, 1960, 419 U.N.T.S. 125; Agreement Concerning the Niger River Commission and the Navigation and Transport on

watercourses. Okowa points out that these duties are generally complied with even in the absence of applicable treaty provisions.[130] Similarly, in a comprehensive study of practice surrounding the duty to warn in customary international law, John Woodliffe concludes that it is more developed in situations that involve the utilisation of a shared natural resource (SNR), such as an international watercourse system.[131]

The procedural rules set down in the 1997 U.N. Convention codify and formalise many existing rules of customary international law. In so doing, the Convention further strengthens and legitimises such rules. In summarising the procedural rules as set down in Part II of the Draft Articles, Bourne concluded that,

> [f]or the most part, the basic requirements of the exchange of information, notice, consultation, and negotiation now form part of customary international law. In fleshing out these basic rules, such as providing for a six-month time limit, the ILC has engaged in beneficial progressive development of the law....the new provisions merely elaborate the existing law and will make it more effective. Insofar as these provisions constitute new law, they should have little difficulty in gaining ready acceptance by the international community.[132]

In relation to the law of international watercourses, however, the very central role of procedural rules in facilitating effective application of the principle of equitable utilisation, and of the subsidiary rule on the prohibition of significant transboundary harm, as well as their

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the River Niger, Nov. 25, 1964, 587 U.N.T.S. 19; 1971 Act of Santiago concerning Hydrologic Basins, *reprinted in* II Y.B. OF INT'L L. COMM'N. 324 (1974); Agreement on the Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River, U.S.-Mex., Aug. 30, 1973, 12 I.L.M. 1105; Agreement Between the United States of America and Canada on the Great Lakes Water Quality, U.S.-Can., art. IX, Nov. 22, 1978, 30 U.S.T. 1383.

129. For a comprehensive survey of State practice in this area, *see* J.G. LAMMERS, POLLUTION OF INTERNATIONAL WATERCOURSES: SEARCH FOR SUBSTANTIVE RULES AND PRINCIPLES OF LAW, 165 (1984).

130. Okowa, *supra* note 50, at 319.

131. J. Woodliffe, *Tackling Transboundary Environmental Hazards in Cases of Emergency: The Emerging Legal Framework, in* CURRENT ISSUES IN EUROPEAN AND INTERNATIONAL LAW 105, 144–45 (Robin White & Bernard Smythe eds., 1990). Woodliffe explains that, "[b]ecause utilization of an SNR heightens the risk of transfrontier environmental harm, there is a broad measure of juristic support for the existence of a duty to warn states of any emergency situation which might cause sudden harmful effects to their environment." *Id.* at 115.

132. Charles B. Bourne, *The International Law Commission's Draft Articles on the Law of International Watercourses: Principles and Planned Measures*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 65, 72 (1992) (citation omitted).

elaboration through the 1997 Convention, lends such procedural rules added significance. As Special Rapporteur McCaffrey concluded in his Third Report, "Thus the doctrine of equitable utilization does not exist in isolation. It is part of a normative structure that includes procedural requirements necessary to its implementation: the substantive and procedural principles form an integrated whole."[133]

IV. CONCLUSION: ENVIRONMENTAL PROTECTION IN INTERNATIONAL WATER LAW

There remains considerable debate surrounding the role and influence of environmental factors in general, and the environmental impact of the use of an international watercourse on other watercourse States in particular, in the determination of an equitable regime for the utilisation of international watercourses. Some leading authorities have concluded that causing significant harm to the environment is a special category of injury that makes the harmful utilisation an inequitable use of the watercourse per se.[134] The International Law Association clearly articulated the opposing view, stating that "uses of the waters by a basin State that cause pollution in a co-basin State must be considered from the overall perspective of what constitutes an equitable utilization."[135] This pronouncement dates from before the advent of modern international environmental law and policy normally associated with the 1972 Stockholm process.

The International Law Commission has been rather more circumspect regarding the significance of the obligation to prevent transboundary harm for the operation of the principle of equitable utilisation.[136] Its 1991 Draft Articles accorded priority to the duty to prevent harm so that pollution, or any other class of interference, that caused significant harm would be inequitable per se.[137] In 1993, the Special Rapporteur, Robert Rosenstock, considered that the Draft Articles should be updated to reflect developments in the area of international environmental law and practice. He proposed a redraft of Article 7 that would have made equitable and reasonable utilisation the decisive criterion in determining the permissible uses of an international

133. MCCAFFREY, *supra* note 83, at 411 (citing Stephen C. McCaffrey, *Third Report*, 2 Y.B. INT'L L. COMM'N 15, pt. 1 (1987)).

134. *See* NOLLKAEMPER, *supra* note 100, at 68–69.

135. Int'l L. Ass'n, *Report of the Fifty-Second Conference* 499 (Helsinki, Aug. 1966), *reprinted in* THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 1, at 779, 795.

136. *See generally* Ximena Fuentes, *The Criteria for the Equitable Utilization of International Rivers*, 67 BRIT. Y.B. INT'L L. 337, 409–11 (1996).

137. *See id.* at 409–10.

watercourse. His proposal also would have given special treatment to pollution so that it created a rebuttable presumption of inequity.[138] The final version of Article 7 adopted by the Commission in 1994 makes no mention of pollution and simply subordinates the obligation to prevent significant harm to the principle of equitable and reasonable utilisation.[139] Therefore, at least in relation to Articles 5 and 7, it would appear that pollution is not to be given special treatment nor viewed as a particularly significant class of harm. However, the ILC's 1994 Draft Articles, and now the 1997 U.N. Convention, proceeded to include a general obligation to "protect and preserve the ecosystems of international watercourses"[140] and an obligation to prevent, "reduce and control pollution of an international watercourse that may cause significant harm to other watercourse States or to their environment."[141] Similarly, the Convention requires watercourse States to take all measures necessary to protect and preserve the marine environment.[142] Neither the Convention nor the commentary to the earlier Draft Articles elaborates on the relationship between these obligations and the principle of equitable utilisation. In particular, the draft lacks clarity as to whether the scope of the latter principle is limited by the operation of these environmental obligations. Somewhat unhelpfully, the commentary to Article 21(2) merely states that "[t]his paragraph is a specific application of the general principles contained in articles 5 and 7."[143]

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138. *See Non-Navigational Uses of International Watercourses*, 23 ENVTL. POL'Y & L. 241 (UN/ILC), 242 (1993). The proposed Article 7 provided that

> [w]atercourse States shall exercise due diligence to utilize an international watercourse in such a way as not to cause significant harm to other watercourse States, absent their agreement, except as may be allowable under an equitable and reasonable use of the watercourse. A use which causes significant harm in the form of pollution shall be presumed to be an inequitable and unreasonable use unless there is:
>
> (a) a clear showing of special circumstances indicating a compelling need for ad hoc adjustment; and
>
> (b) the absence of any imminent threat to human health and safety.

Robert Rosenstock, *First Report on the Law of the Non-Navigational Uses of International Watercourses*, ¶ 25, U.N. Doc. A/CN.4/451 (Apr. 20, 1993).

139. *Report of the International Law Commission on the work of its forty-sixth session, Supplement No. 10* A/49/10 (May 2-July 22, 1994), at 236. The commentary to Article 7 explains that "[i]n certain circumstances 'equitable and reasonable utilization' of an international watercourse may still involve significant harm to another watercourse State. Generally, in such instances, the principle of equitable and reasonable utilization remains the guiding criterion in balancing the interests at stake." *Id.* arts. 5, 7.

140. *Id.* art. 20.

141. *Id.* art. 21(2).

142. *Id.* art. 23.

143. *Id.* at 291.

At any rate, it is possible to argue that environmental factors are likely to enjoy a certain priority, or at least an increasing significance, within the balancing process that comprises practical implementation of the principle of equitable utilisation. Though any conclusions as to the relative significance of factors relating to environmental protection could only ever amount to a "rule of thumb" or broad guidelines to assist the diplomatic negotiator, legal advisor, or judicial decision-maker, they are useful and necessary nonetheless. One writer, discussing the case of the Jordan River, notes that "consideration of all these factors without a method of gauging their relative importance cannot provide conclusive and realistic solutions to disputes over international waters."[144] Articles 6(3)[145] and 10(1)[146] of the 1997 Convention respectively provide that no particular factor or use enjoys inherent priority. Yet, it would certainly appear that, along with the consideration of vital human needs that are accorded a special position under Article 10(2),[147] factors relating to environmental protection, as articulated or alluded to in Articles 5, 6, 7, 20, 21, 22, and 23, enjoy enhanced significance by virtue of their express and detailed inclusion. Article 21(3), for example, specifically lists indicative measures and methods to prevent, reduce, and control pollution of an international watercourse on which watercourse States shall consult with a view to reaching agreement.[148] Such detailed conventional guidance for the practical implementation of the obligation to prevent, reduce, and control pollution of an international watercourse

144. Jonathan M. Wenig, *Water and Peace: The Past, the Present, and the Future of the Jordan River Watercourse: An International Law Analysis*, 27 N.Y.U. J. INT'L L. & POL. 331, 348 (1995).

145. Article 6(3) provides,

> The weight to be given to each factor is to be determined by its importance in comparison with that of other relevant factors. In determining what is a reasonable and equitable use, all relevant factors are to be considered together a a conclusion reached on the basis of the whole.

U.N. Convention, *supra* note 1, art. 6(3).

146. Article 10(1) provides that, "[i]n the absence of agreement or custom to the contrary, no use of an international watercourse enjoys inherent priority over other uses." *Id.* art. 10(1).

147. Article 10(2) provides that, "[i]n the event of a conflict between uses of an international watercourse, it shall be resolved with reference to articles 5 to 7, with special regard being given to the requirements of vital human needs." *Id.* art 10(2).

148. These include:

> (a) Setting joint water quality objectives and criteria;
>
> (b) Establishing techniques and practices to address pollution from point and non-point sources;
>
> (c) Establishing lists of substances the introduction of which into the waters of an international watercourse is to be prohibited, limited, investigated or monitored.

Id. art. 21(3).

that may cause significant harm to other watercourse States is of considerable assistance in determining whether environmental factors have been adequately considered, or in ensuring that environmental obligations are duly discharged, as a component of an equitable regime for the utilisation of shared waters. Obviously, the implementation of detailed environmental provisions will be greatly assisted where international joint bodies have been established with the requisite technical and other resources to facilitate appropriate fact-finding and consultation. Some commentators have interpreted Articles 7, 20, and 21 of the Draft Articles as establishing the requirement of due diligence as the determinative criterion so that harm due to a failure to satisfy this requirement is inequitable per se.[149]

Procedural obligations, and the requirement to conduct an EIA in particular, play a key role in ensuring that environmental considerations relating to a planned or continuing use of a watercourse are adequately understood and presented and thus that they may properly be taken into account. Also, the principle of sustainable development, if it is to be equated with the principle of equitable utilisation in the particular context of international watercourses, would lend support to the proposition that considerations of environmental protection enjoy considerable significance under the latter principle, as environmental protection has always constituted a major component of the former.

The widespread use of international joint commissions to facilitate the common management of international watercourses ensures that factors relating to environmental protection are identified, articulated and given due consideration in determining regimes for the equitable utilisation of those watercourses. Such international bodies are charged with a variety of functions, ranging from fact-finding roles to the settlement of disputes. As these bodies' environmental responsibilities are normally expressly included in their founding instruments, they would usually enjoy a clear mandate to act in the interest of environmental protection as well as the technical, legal, political, and administrative expertise to do so effectively. Finally, it is a moot point whether several of the proposed rules and principles of international environmental law have achieved the status of "custom" for the purposes of Article 10(1) and, accordingly, for determining

149. Brunée & Toope, *supra* note 30, at 63–64, conclude that "the Draft Articles adopted in 1994...ultimately make due diligence the decisive criterion. Thus, significant harm resulting from a failure to exercise due diligence violates both the transboundary harm and equitable use principles." However, Fuentes strongly disagrees with this interpretation. *See* Fuentes, *supra* note 136, at 411.

whether considerations of environmental protection may enjoy priority over other relevant factors. Indeed, regardless of whether or not they have formally achieved customary status, the sophisticated and detailed articulation of the rules and principles of international environmental law provides a comprehensive set of reference standards and procedures to assist the consideration of environmental impacts and benefits. Perhaps the degree of normative specificity of rules and principles of environmental protection, substantive and procedural, plays the most significant role in ensuring that environmental values are accorded considerable, and even disproportionate, weight in any equitable balancing of interests.

A. Sustainable Development

The notion of sustainable development has its origins in conventional and declaratory instruments of international environmental law and has always sought to reconcile protection of the natural environment with the requirements of economic and social development. It follows that environmental considerations would figure strongly in any application of the principle. For instance, in a critique of a recent U.K. Government White Paper setting out its strategy for sustainable development, commentators condemned its under-emphasis of the essential environmental dimension of the concept.[150] The 1987 Bruntland Report, which brought the concept to centre stage, elaborates on its substantive content, stating that "it contains within it two key concepts: the concept of 'needs'...and the idea of limitations imposed by the state of technology and social organizations on the environment's ability to meet present and future needs."[151] In an examination of the relative priority accorded to environmental and developmental values respectively under the concept of sustainable development, Ximena Fuentes concluded that "[t]he balance seems to tip in favour of the protection of the environment," and that "environmental protection has developed to a certain extent at the expense of international economic law relating to development."[152] She explains that this phenomenon can be attributed to a number of reasons. First, she suggests that there is a

150. *See* A. Ross-Robertson, *Is the Environment Getting Squeezed Out of Sustainable Development?*, 2003 PUB. L. 249. *See also* Dieter Helm, *Objectives, Instruments and Institutions, in* ENVIRONMENTAL POLICY: OBJECTIVES, INSTRUMENTS AND IMPLEMENTATION 1 (Dieter Helm ed., 2000).

151. WORLD COMM'N ON ENV'T & DEV., OUR COMMON FUTURE 43 (1987).

152. Ximena Fuentes, *International Law-Making in the Field of Sustainable Development: The Unequal Competition Between Development and the Environment*, 2 INT'L ENVTL. AGREEMENTS: POL., L. & ECON. 109, 109 (2002).

"democratic deficit" in international environmental law making, due to the opening of "the international environmental law-making process to greater participation by the so-called 'transnational civil society'," [153] for whom "environmental concerns have figured more prominently in their international agenda." [154] She observes that "NGOs [non-governmental organisations] concerned with poverty alleviation and those propounding more equitable economic relations between States seem not to have acquired the same degree of influence as environmental NGOs, industries, and businesses." [155] Secondly, she argues that "[e]nvironmental law, in contrast to international development law, has proved particularly suitable for the use of a 'rights and duties' language," which provides environmental law, and the values that are inherent therein, with "autonomy" or something of an absolute character so that "policy considerations are generally excluded from the interpretation and application of the law." [156] She explains that "[t]his perspective puts environmental considerations in a privileged position as it would not be necessary to assess their relevance alongside other concerns." [157] In relation to shared water resources in particular, Fuentes points to the

> apparent contradiction between the principle of equitable utilization, which in principle requires consideration of the environmental impact of the utilization of an international watercourse along with other criteria, and Articles 7, 20 and 21 [of the 1997 Convention] which might be interpreted as having the effect of putting environmental impact outside the scope of application of the principle of equitable utilization. [158]

Fuentes goes on to explain that this interpretation "results, in practice, in a restriction upon the operation of the principle of equitable utilization. According to this interpretation, environmental impact will not be subject to distributive (or developmental) considerations." [159] Thirdly, Fuentes points to the emergence of a nascent human right to a

153. *Id.* at 113.
154. *Id.* at 115.
155. *Id.* at 117-18.
156. *Id.* at 118.
157. *Id.*
158. *Id.* at 124.
159. *Id.* Indeed, Fuentes points to support for this interpretation, stating that, "in other areas of international law, such as the allocation of trans-boundary natural resources, the idea that environmental impact should be one more criterion to be taken into account in the establishment of equitable regimes for the utilization of shared natural resources has run into considerable opposition." *Id.* at 125.

"decent" or "healthy" environment and suggests that, "through the establishment of a human right to a healthy environment, environmental considerations may be given priority over mere economic and social interests."[160] She notes that "the very idea of environmental rights can defeat the central nucleus of sustainable development [and thus of equitable utilisation]: the achievement of integration between development and the environment."[161] She further argues that, even if the right to a healthy environment cannot be regarded as a "human right" in any orthodox sense, it may be considered to be a political and civil right or an economic and social right[162] and concludes that "either of these two forms strengthen the potential of a right to a healthy environment to take precedence over non-rights based interests."[163]

In relation to the use of shared freshwater resources, it has been suggested that the principle of equitable and reasonable utilisation "operationalises" the notion of sustainable development.[164] Jutta Brunée and Stephen Toope comment that

> a link between equitable use and sustainability would promote common environmental interests of states in several respects. First, the linkage emphasizes the need to consider the environmental context when balancing competing use interests. Below the threshold of transboundary harm, and even where there may be no current interference with the equitable share of another state, a sustainability criterion would articulate long-term environmental limits to water use. Second, the notion of sustainable development ties a state's resource use into a broader international context. Because the concept applies both in the "micro" and "macro" context of environmental management, a state's performance will be measured

160. *Id.* at 126.

161. *Id.*

162. *See generally* International Covenant on Economic, Social and Cultural Rights, G.A. Res. 2200A (XXI), at 49, U.N. GAOR, XXI Sess., Supp. No. 16, U.N. Doc. A/6316 (Dec. 16, 1966). *See also* U.N. High Commissioner for Human Rights, Sub-Comm. on Human Rights Resolution 2000/8, *Promotion of the Realization of the Right to Drinking Water and Sanitation*, U.N. Doc. E/CN.4/Sub.2/2004/L.20 (Aug. 17, 2000) (affirming that the right to water is an individual and collective human right and is closely linked to other rights); Henri Smets, *The Right to Water Is a Human Right*, 34 ENVTL. POL'Y & L. 241(2004); S.R. Tully, *The Contribution of Human Rights to Freshwater Resource Management*, 14 Y.B INT'L. ENVTL. L. 101 (2003).

163. Fuentes, *supra* note 152, at 128.

164. *See, e.g.*, Wouters & Rieu-Clarke, *supra* note 63, at 283; Kroes, *supra* note 63, at 83; McIntyre, *supra* note 42, at 88.

> against local, regional, and even global sustainability criteria. The concept thus acknowledges the commonality of environmental concerns and the indivisibility of ecosystems.[165]

Therefore, universal recognition of the application of the overarching objective of sustainable development may be regarded as making applicable to this area of law the plethora of international rules and standards relating to environmental protection in general and to the protection of water quality and watercourse ecosystems in particular. In the course of an analysis of the principles of equity, no-harm, and sustainability as included in the 1997 Convention, the authoritative commentator Charles Bourne concluded that sustainability is a goal or objective that could be attained by reliance on equity.[166] Similarly, Lowe concludes, in relation to the flexibility inherent in the application of equitable principles, that

> [t]hese characteristics make equity particularly suitable for discussions in contexts where there are competing interests which have not hardened into specific rights and duties. This will be true primarily in areas where the law is not highly developed. The nascent concept of intergenerational equity, and of equitable principles in environmental law, are examples.[167]

Despite criticism to the effect that the principle of equitable utilisation as articulated in the 1997 U.N. Convention does not go far enough in terms of achieving sustainability,[168] Botchway concludes that "the Watercourses Convention does represent an advance on the

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165. Brunnée & Toope, *supra* note 30, at 67–68 (citation omitted).

166. Charles B. Bourne, *The Primacy of the Principle of Equitable Utilization in the 1997 Watercourses Convention*, 35 CAN. Y.B. INT'L L. 215, 221–30 (1997).

167. Vaughan Lowe, *The Role of Equity in International Law*, 12 AUSTL. Y.B. INT'L L. 54, 73 (1992), *reprinted in* M. KOSKENNIEMI, SOURCES OF INTERNATIONAL LAW 403 (2000).

168. *See generally* A. Nollkaemper, *The Contribution of the International Law Commission to International Water Law: Does It Reverse the Flight from Substance?*, XXVII NETH. Y.B. INT'L L. 39 (1996); Günther Handl, *The International Law Commission's Draft Articles on the Law of International Watercourses (General Principles and Planned Measures): Progressive or Retrogressive Development of International Law?* 3 COLO. J. INT'L ENVTL. L. & POL'Y. 123 (1992); Ellen Hey, *Sustainable Use of Shared Water Resources: The Need for a Paradigmatic Shift in International Watercourse Law*, *in* THE PEACEFUL MANAGEMENT OF TRANSBOUNDARY RESOURCES 127 (Gerald H. Blake et al. eds., 1995); Reaz Rahman, *The Law of the Non-Navigational Uses of International Watercourses: Dilemma for Lower Riparians*, 19 FORDHAM INT'L L.J. 9 (1995–1996); Eyal Benvenisti, *Collective Action in the Utilization of Shared Freshwater: The Challenges of International Water Resources Law*, 90 AM. J. INT'L L. 384 (1996).

previous judicial texts, especially the Helsinki Rules."[169] He opines that the doctrine of equitable utilisation adopted under the Convention, if considered in conjunction with the obligations to notify and co-operate, includes many of the features of sustainable development, noting that "in many ways, the Watercourses Convention incorporates the concepts of polluter pays, integration of environmental concerns into economic planning, the precautionary principle, and EIA."[170] Further, he goes so far as to suggest renaming the concept borne of the marriage of sustainable development and equitable utilisation, stating, "all this can be recast in a modified version of sustainable development and equitable development, a hybrid concept—*sustainable equity*."[171]

Sustainable development has received notable support in judicial decision making. In the *Gab□íkovo-Nagymaros* case,[172] it is clear that the International Court of Justice (ICJ) was concerned to ensure that, in the development of the Danube, environmental factors were to be given full consideration and accorded considerable significance in the determination of an equitable regime for the utilisation of the river. The Court referred to "this need to reconcile economic development with protection of the environment...aptly expressed in the concept of sustainable development."[173] In a separate opinion, Judge Weeramantry considered sustainable development to be "more than a mere concept, but as a principle with normative value which is crucial to the determination of this case."[174] Therefore, the ICJ is prepared to have regard for the principle of sustainable development in order to identify and give effect to the environmental obligations inherent in the principle of equitable and reasonable utilisation of an international watercourse "with a view to attaining optimal and sustainable utilization thereof," as required under Article 5 of the 1997 U.N. Convention.

Of the various substantive and procedural elements that together constitute the concept of sustainable development,[175] the requirement that States conduct an EIA of projects or activities likely to cause significant harm to other States enjoys the clearest support in State

169. Francis N. Botchway, *The Context of Trans-Boundary Energy Resource Exploitation: The Environment, the State and the Methods*, 14 COLO. J. INT'L ENVTL. L. & POL'Y 191, 222-23 (2003).

170. *Id.* at 223.

171. *Id.* at 222.

172. Case Concerning the Gab□íkovo-Nagymaros Project, 1997 I.C.J. 7 (Sept. 25).

173. *Id.* at 77-78, ¶ 140.

174. *Id.* at 88 (separate opinion of Vice-President Weeramantry).

175. *See* Phillippe Sands, *International Law in the Field of Sustainable Development*, 65 BRIT. Y.B. INT'L L. 303, 379 (1994) (on the elements of sustainable development). *See also* Botchway, *supra* note 169, at 204-14.

and judicial practice. This requirement possesses the clearest independent normative status, and can, in practical terms, exert the greatest influence on the attainment of sustainability and the discharge of the environmental obligations inherent in equitable utilisation.

B. Environmental Impact Assessment

The requirement to carry out an environmental impact assessment of any development or activity with the potential to cause harm to the environment of an international watercourse or of another watercourse State ensures that environmental concerns figure prominently in determining an equitable regime for the utilisation of an international watercourse. As the practice of assessment evolves through, inter alia, the collection and study of environmental impact statements in central repositories;[176] the adoption of a general convention on transboundary EIA, which is widely taken to set universal minimum standards for transboundary EIA procedures;[177] and the elaboration of sector-specific guidelines by multilateral development banks[178] or non-

176. For example, many academic institutions collect and collate completed Environmental Impact Statements for the purposes of teaching and research.

177. Convention on Environmental Impact Assessment in a Transboundary Context, Feb 25, 1991, 30 I.L.M. 802. *See also* Okowa, *supra* note 50, at 282 ("A broad range of standards and largely non-controversial principles may nevertheless be detected in existing treaty instruments. The 1991 ECE Convention on environmental impact assessment, for instance, specifies in some detail the minimum components of a good environmental impact assessment.").

178. For example, The European Bank for Reconstruction and Development (EBRD) has adopted an Environmental Policy that seeks to ensure, through a very detailed environmental appraisal process, that the projects it finances are environmentally sound and are designed to operate in compliance with applicable regulatory requirements. *See generally* European Bank for Reconstruction & Development, Environmental Policy (2003), http://www.ebrd.com/about/policies/enviro/policy/policy.pdf (last visited Feb 2, 2006). The Bank's Environmental Policy requires that "[f]or projects involving transboundary impacts, the notification and consultation guidelines in the working papers to the UNECE Convention on EIA in a Transboundary Context must be taken into account in the planning process and followed in principle." *Id.* at 20. It further provides that, "[f]or all projects involving Environmental Impact Assessments according to the Bank's requirements, the Bank will take guidance from the principles of the UNECE's Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters...." *Id.* To this end, the EBRD has prepared detailed Environmental Procedures that provide guidance as to how the environmental appraisal should be conducted and over 80 sets of Sub-Sectoral Environmental Guidelines covering, for example, fish processing, logging, stone, sand and gravel extraction, pulp and paper, hazardous waste management, potable water supplies, etc. *See generally id.* at http://www.ebrd.com/about/policies/enviro/procedur/index.htm (last visited Feb. 2, 2006).

governmental organisations,[179] an increasingly sophisticated means of identifying, understanding, and communicating environmental concerns is developing that ensures that such concerns can readily be taken into account by decision makers and policy makers. Numerous international expert groups, such as the World Water Council (WWC)[180] and the Global Water Partnership (GWP),[181] have contributed to the formulation of guidelines, codes of conduct, or practice standards on the exploitation of shared water resources that advocate the use of EIA procedures. Similarly, the World Commission on Dams (WCD), a forum that brought together representatives of all stakeholders with an interest in dam-building, including environmental NGOs, reported its conclusions in 2000 and proposed 26 protective guidelines for the building of dams.[182] In particular, the WCD recommended among its Strategic Priorities for Decision-Making the use of Comprehensive Options Assessment, stating that "[i]n the assessment process, social and environmental aspects have the same significance as economic and financial factors. The options assessment process continues through all stages of planning, project development and operations."[183]

It is somewhat redundant to argue that environmental impact assessment of projects or activities potentially causing transboundary harm is not required by law. The obligation to conduct an EIA is commonly associated with the well established duty to prevent transboundary harm[184] and its allied duties to notify and consult with potentially affected States in relation to any planned projects or activities that might give rise to such harm.[185] Even those commentators who do not accept that the requirement to conduct transboundary EIA stems from the duty to prevent transboundary harm do not argue that the requirement enjoys no normative status in general international law, but

179. *See* World Wildlife Fund (WWF), Freshwater, Dams Initiative, *Damn Dams!*, http://www.panda.org/dams (last visited May 10, 2006); WWF, Dam Right: WWF's Dams Initiative, *To Dam or Not to Dam? Five Years on from the World Commission on Dams, at* http://assets.panda.org/downloads/2045.pdf (last visited May 10, 2006).

180. A search of the WWC's World Water Actions Inventory, www.worldwatercouncil.org, found 840 listed actions, campaigns, legal proceedings, policy initiatives, etc. where the issue of EIA of freshwater projects is central.

181. *See* Global Water Partnership, GWPToday, http://www.gwpforum.org (last visited Feb. 2, 2006) (listing numerous technical papers and reports prepared or commissioned by the GWP).

182. *See* WORLD COMM'N ON DAMS, DAMS AND DEVELOPMENT: A NEW FRAMEWORK FOR DECISION-MAKING (2000), *available at* http://www.dams.org//docs/report/wcdintro.pdf (last visited Feb. 2, 2006).

183. *Id.* at 24.

184. *See* DUPUY, *supra* note 3, at 66–69.

185. *See* BIRNIE & BOYLE, *supra* note 41, at 131.

rather that it has developed instead from the application of the principle of "non-discrimination."[186] The requirement for transboundary EIA has also been closely linked with practical implementation of the more general concept of sustainable development[187] and with application of the precautionary principle.[188] Further, if the due diligence requirement is the determinative criterion in determining breach of the obligation not to cause significant harm and, possibly, a key factor in determining the equity or inequity of a particular regime of utilisation,[189] failure to conduct an adequate EIA is likely, prima facie, to indicate such a breach.

At a more practical level, nearly all infrastructure projects funded by MDBs or otherwise assisted by international development agencies are now required to undergo an EIA procedure in order to assess their potential domestic, transboundary, and global environmental effects.[190] Indeed, in relation to projects for the storage and diversion of water in transboundary rivers, the WCD expressly recommends that,

> [w]here a government agency plans or facilitates the construction of a dam on a shared river in contravention of the principle of good faith negotiations between riparians, external financing bodies withdraw their support for projects and programmes promoted by that agency.[191]

Given the significance of the EIA procedure for effective implementation of and compliance with the principle of "good faith negotiations," it is clear that transboundary EIA will often be required in practice. This is true, not only of projects provided with financial assistance by MDBs or other public development agencies, but also of projects funded by the ten of the world's leading commercial banks that have so far agreed to abide by the World Bank's voluntary code of environmental standards when making loans for infrastructural projects

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186. Knox, *supra* note 41, at 296–301.

187. *See* Sands, *supra* note 175; Botchway, *supra* note 169, at 194–214; Ximena Fuentes, *Sustainable Development and the Equitable Utilization of International Watercourses*, 69 BRIT. Y.B. INT'L L. 119, 125–29 (1998).

188. *See* Owen McIntyre & Thomas Mosedale, *The Precautionary Principle as a Norm of Customary International Law*, 9 J. ENVTL. L. 221 (1997); Alexandre Kiss, *The Rights and Interests of Future Generations and the Precautionary Principle*, *in* THE PRECAUTIONARY PRINCIPLE AND INTERNATIONAL LAW 27–28 (David Freestone & Ellen Hey eds., 1996).

189. *See* Brunnée & Toope, *supra* note 30, at 63.

190. *See generally* William V. Kennedy, *Environmental Impact Assessment and Multilateral Financial Institutions*, *in* II HANDBOOK OF ENVIRONMENTAL IMPACT ASSESSMENT: ENVIRONMENTAL IMPACT ASSESSMENT IN PRACTICE: IMPACT AND LIMITATIONS 98 (J. Petts ed., 1999).

191. WORLD COMM'N ON DAMS, *supra* note 182, at 281.

in developing countries.[192] Many of these procedures have evolved over time in terms of their sophistication and thoroughness and now comprise a de facto corpus of EIA law for States wishing to avail of such assistance.[193] However, these rules impact more on developing than developed countries. A survey published recently by *The Economist* points out that in developed countries a great deal of water infrastructure has already been built and, thus, most disputes over international watercourses are likely to arise among developing countries as most future development is likely to take place in less developed countries.[194] Charles Okidi estimated in 1988 that, though Africa possesses about one-third of the world's hydropower potential, it currently generates only two percent,[195] while in 1992 he estimated that "at present Africa cultivates approximately 24 percent of its available agricultural land."[196] Lending for large dams alone accounts for about ten per cent of the World Bank's lending portfolio. The Bank's very considerable influence on States in the area of international freshwater policy is evidenced by its role in brokering a compact agreed upon by the ten States of the Nile Basin.[197] Many other development agencies and

192. *World This Week*, THE ECONOMIST, June 7, 2003, at 7.

193. For the current World Bank rules on EIA, see WORLD BANK, *Environmental Assessment*, *in* THE WORLD BANK OPERATIONAL MANUAL: OPERATIONAL POLICY 4.01 (Jan. 1999). For an overview of the rule on EIA required for development projects funded by the Asian Development Bank, see John A. Boyd, *Reports from Organizations*, 4 Y.B. INT'L ENVTL. L. 528, 528–34 (1993). For a similar overview covering the European Bank for Reconstruction and Development, see Gregory Rose, Y.B. INT'L ENVTL. L., *id.* at 534–40; for the European Investment Bank, see *id.* at 540–43; for the Inter-American Development Bank, see Dana V. Martin, Y.B. INT'L ENVTL. L., *id.* at 544–50.

194. *Priceless: A Survey of Water*, THE ECONOMIST, July 19, 2003, at 9 (special insert). To illustrate, the survey points out that the United States has 7,000 cubic metres of water storage capacity per head of population, while South Africa has 700, the rest of Africa has 25, and Kenya has four. *Id.* at 10. Similarly, Ethiopia has exploited an estimated three percent of its hydropower potential while the figure for Japan is 90 percent. *Id.* In order to illustrate further the urgency of the need to improve water infrastructure in developing countries, the survey points out that "[a]s much as 60% of the world's illness is water-related." *Id.* at 5. In 2000, investment in water in developing countries was estimated to be running at between $75–80 billion, and a group established under the auspices of the WWC and the GWP suggested that, in order to meet the development goals agreed to at the Johannesburg Earth Summit in August 2002, investment would have to be raised to around $180 billion. *Id.* "During the 1990s, an estimated [U.S.] $32–46 billion was spent annually on large dams, four-fifths of it in developing countries." WORLD COMMISSION ON DAMS, *supra* note 182, at 48.

195. C.O. Okidi, *The State and the Management of International Drainage Basins in Africa*, 28 NAT. RESOURCES J. 645, 649, tbl. 1 (1988).

196. Okidi, *supra* note 27, at 148.

197. *See generally* Nile Basin Initiative, http://www.nilebasin.org (last visited May 10, 2006) ("provid[ing] a forum for cooperative development of the water resources of the Nile River").

even donor States contribute significantly to water projects and thus can ensure that environmental considerations are fully taken into account by requiring EIA.[198] Ultimately, one leading commentator concludes that, "[i]n practice, many least-developed countries conduct EIA for projects only when it is required as a condition of international aid."[199] As well as providing a means for the discharge of the duty to prevent transboundary harm and the duty to co-operate and for the practical implementation of the precautionary principle and the concept of sustainable development, EIA is very widely used by MDBs and other development agencies to ensure that considerations of environmental protection are fully taken into account in the planning of projects enjoying their support. This de facto requirement to conduct an EIA provides a more or less formal process for facilitating the consideration of environmental impacts, which is rather more than exists for any of the other factors, even those relating to vital human needs, which occupy a special position by virtue of Article 10(2). The very existence of a formal procedure can only help to ensure that environmental considerations "punch above their weight" in the process of balancing competing interests. Also, consistent use by States of the EIA procedure and its widespread adoption into domestic legislation can only add to the stock of international State practice supporting the proposition that the requirement to conduct transboundary EIA has become a norm of customary international law.

C. International Commissions

It is, of course, very difficult to study empirically the relative significance attached to environmental factors in State practice relating to the utilisation of international watercourses as such practice will often take place at a confidential and unrecorded diplomatic level. Therefore,

198. For example, the share of British overseas development aid going to water projects has ranged between 3.5 and 5 percent from 1997 to 2002. *Priceless: A Survey of Water*, *supra* note 194, at 5. On April 23, 2003, the Commission of the European Union put forward proposals to Member States for the establishment of a €1 billion water fund for the purposes of assisting African, Caribbean and Pacific (APC) countries in achieving the goals set out in the 2002 Johannesburg World Summit on Sustainable Development. The fund would operate under the European Development Fund (EDF) and would provide finance for sustainable water-related projects and activities. Martin Hedemann-Robinson, *Commission Proposal for New EU Water Fund for ACP Countries*, 11 ENVTL. LIAB. CS25 (2003).

199. Knox, *supra* note 41, at 297 n.43. *See also* CHRISTOPHER WOOD, ENVIRONMENTAL IMPACT ASSESSMENT: A COMPARATIVE REVIEW 303 (1995); Clive George, *Comparative Review of Environmental Assessment Procedures and Practice*, *in* ENVIRONMENTAL ASSESSMENT IN DEVELOPING AND TRANSITIONAL COUNTRIES: PRINCIPLES, METHODS AND PRACTICE 35, 49 (Norman Lee & Clive George eds., 2000).

it is useful to examine the practice of the many international joint commissions established to facilitate inter-governmental agreement in river basin planning and utilisation. Such bodies vary greatly in terms of their composition and function but almost all possess considerable technical skills and resources and operate under an express mandate to further the environmental protection of the international watercourse and, possibly, the wider natural environment. This trend has become more marked in recent years. For example, the 1994 Agreements on the Protection of the Rivers Meuse and Scheldt created an international commission to facilitate co-operation between the parties for the purposes of the environmental protection of the rivers.[200] Similarly, the 1994 Convention on Cooperation for the Protection and Sustainable Use of the Danube River[201] established an international commission[202] to ensure co-operation in order to "at least maintain and improve the current environmental and water quality conditions of the Danube River and of the waters in its catchment area and to prevent and reduce as far as possible adverse impacts and changes occurring or likely to be caused."[203] The Danube Commission has more specific functions including, where appropriate, the establishment of emission limits applicable to individual industrial sectors, the prevention of the release of hazardous substances, and the definition of water quality objectives.[204]

The practice of the U.S.-Canada International Joint Commission (IJC) is particularly instructive as it is one of the longest established such agencies and provides a comprehensive body of recorded examples of the consideration of environmental impacts in the context of the use of shared freshwaters.[205] The IJC was established by the 1909 Boundary Waters Treaty[206] for the purpose of issuing orders of approval in response to applications for the use, obstruction, or diversion of the shared boundary waters that may affect the natural water levels or flows.[207] The IJC may also investigate specific issues if so requested by

200. Agreements on the Protection of the Rivers Meuse and Scheldt, Belg.-Fr.-Neth., Apr. 26, 1994, 34 I.L.M. 851, 851, 859, Art. 2(2).

201. Convention on Cooperation for the Protection and Sustainable Use of the Danube River, (June 29, 1994), http://eelink.net/~asilwildlife/DanubeConvention.html (last visited Feb. 25, 2006).

202. *Id.* art. 18.

203. *Id.* art. 2(2).

204. *Id.* art. 7.

205. *See* Fuentes, *supra* note 187, at 150-55.

206. Treaty Relating to Boundary Waters and Questions Arising Between the United States and Canada, U.S.-U.K., Jan. 11, 1909, 102 BRIT. & FOREIGN STATE PAPERS 137, art. VII, *available at* http://www.ijc.org/rel/agree/water.html.

207. *Id.* arts. III, IV.

both States.[208] For example, in 1975 the State parties requested that the IJC examine and report on the transboundary implications of the proposed completion and operation of the Garrison Diversion scheme in the State of North Dakota and make recommendations in relation to modifications, alterations, or adjustments that might assist in meeting the obligations of Article IV of the 1909 Treaty. The Treaty provides that the boundary waters shall not be polluted on either side to the injury of health or property on the other.[209] The Governments of Canada and Manitoba objected to the project, inter alia, on the ground that it would adversely affect water quality as well as fish and wildlife resources in Manitoba by the transfer of foreign biota.[210] The IJC concluded that the project as originally envisaged by the United States would cause injury to health and property in Canada as a result of adverse impacts on the water quality and the biological resources of Manitoba[211] and that domestic, industrial, and agricultural uses of boundary waters in the Province would be detrimentally affected.[212] The IJC concluded generally that, although most of the adverse impacts could be mitigated, the risks of possible biota transfers were so serious that the only acceptable solution was to delay the construction of those features of the project that could result in such transfers.[213] Thus, the IJC was effectively adopting an "ecosystems approach" to consider the potential adverse impacts of the project. Similarly, in 1977, the State parties requested that the IJC examine and report upon the water quality of the Poplar River,

> including the transboundary water quality implications of the thermal power station of the Saskatchewan Power Corporation and its ancillary facilities, including coal-mining, at a site near Coronach, Saskatchewan, and to make recommendations which would assist Governments in ensuring that the provisions of Article IV of the said [1909] Treaty are honoured.[214]

The Commission found that the resulting reduction in the quantity of water crossing the boundary was expected to have an adverse effect on the existing biological community in the East Fork of

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208. *Id.* art. IX.

209. INT'L JOINT COMM'N, TRANSBOUNDARY IMPLICATIONS OF THE GARRISON DIVERSION UNIT 130–31 (1977).

210. *See generally* Fuentes, *supra* note 187, at 150–55 (examining other "[t]reaties that prohibit pollution in so far as it damages specific interests mentioned by the treaty").

211. INT'L JOINT COMM'N, *supra* note 209, at 3.

212. *Id.* at 59.

213. *Id.* at 114.

214. INT'L JOINT COMM'N, WATER QUALITY IN THE POPLAR RIVER BASIN 210 (1981).

the Poplar River and, though this did not amount to pollution for the purposes of violation of Article IV of the 1909 Treaty, the Commission suggested that this detrimental effect should nevertheless be taken into account by the governments.[215] Once again, the IJC appears to have taken an expansive view of the environmental impacts of the project based on an "ecosystems approach."

Between December 1984 and February 1985, the IJC was requested to examine and report upon the water quality and quantity implications of the proposed coal mine development on Cabin Creek in British Columbia near its confluence with the Flathead River and to make recommendations that would assist Governments in ensuring that the provisions of Article IV of the said treaty are honoured.[216] The Commission concluded unequivocally that the development would pollute the waters of the Flathead River and have a serious impact on its fisheries, and thus, that the effects of the proposed coal mine would constitute a breach of Article IV of the 1909 Treaty.[217]

The potential role of such joint bodies has been considerably augmented by their express mention in a number of important framework conventions relating to international watercourses. Though it does not require the establishment of international joint commissions, the 1997 U.N. Convention expressly recognises the valuable role they can play by providing under Article 8, which contains the general duty to co-operate, that

> [i]n determining the manner of such cooperation, watercourse States may consider the establishment of joint mechanisms or commissions, as deemed necessary by them, to facilitate cooperation on relevant measures and procedures in the light of experience gained through cooperation in existing joint mechanisms and commissions in various regions.[218]

Such joint mechanisms or commissions would be particularly useful in giving effect to the specific measures and methods for preventing, reducing, and controlling pollution of an international watercourse suggested under Part IV of the Convention.[219] Indeed, the

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215. *Id.* at xiii, 197.

216. INTERNATIONAL JOINT COMMISSION, IMPACTS OF A PROPOSED COAL MINE IN THE FLATHEAD RIVER BASIN 3 (1988).

217. *Id.* at 8-9.

218. U.N. Convention, *supra* note 1, at 707, art. 8(2).

219. For example, Article 21(3) proposes that watercourse States introduce the following measures and methods:

(a) Setting joint water quality objectives and criteria;

2000 Southern African Development Community (SADC) Revised Protocol on Shared Watercourses, which was adopted largely to give effect to key provisions contained in the 1997 U.N. Convention,[220] sets out a very detailed institutional framework for its implementation.[221] In contrast to the 1997 U.N. Convention, Article 9 of the 1992 ECE Helsinki Convention, which concerns bilateral and multilateral co-operation, expressly requires that bilateral or multilateral agreements or other arrangements entered into by the parties pursuant to the Convention "*shall* provide for the establishment of joint bodies."[222] Article 9(2) goes on to provide a comprehensive list of tasks that these joint bodies shall undertake, including the collection of data and exchange of information on pollution sources likely to cause transboundary impact, the elaboration of joint monitoring programmes and of joint emission limits and water quality objectives.

Article 9 further provides for the participation of non-riparian coastal States "directly and significantly affected by transboundary impact" in the activities of multilateral joint bodies established by riparians[223] and for the co-ordination of the activities of joint bodies where two or more exist in the same catchment area.[224] Indeed, the 1992 Convention even provides a definition of a "joint body," which it describes as "any bilateral or multilateral commission or other appropriate institutional arrangements for cooperation between the Riparian Parties."[225]

By creating a technically competent inter-governmental body with responsibility for identifying in detail the adverse environmental effects of any ongoing or planned use of an international watercourse,

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(b) Establishing techniques and practices to address pollution from point and non-point sources;

(c) Establishing lists of substances the introduction of which into the waters of an international watercourse is to be prohibited, limited, investigated or monitored.

Id. at 710.

220. The Revised Protocol incorporates all the key substantive provisions contained in the 1997 Convention. Its Preamble expressly refers to the Convention, stating at ¶ 1, "Bearing in mind the progress with the development and codification of international water law initiated by the Helsinki Rules and that the United Nations subsequently adopted the Convention on the Law of the Non-Navigational Uses of International Watercourses." Revised Protocol on Shared Watercourses in the Southern African Development Community, Aug. 7, 2000, 40 I.L.M. 317 (2001).

221. *See id.* art. 5.

222. Convention on the Protection and Use of Transboundary Watercourses and International Lakes, *supra* note 78, at 1319, art. 9(2) (emphasis added).

223. *See id.* at 1319–20, arts. 9(3), 9(4).

224. *Id.* at 1320, art. 9(5).

225. *Id.* at 1315, art. 1(5).

and a formal procedural mechanism for presenting its findings and recommendations in this regard, the increasingly common practice of establishing international joint commissions almost inevitably serves to bring environmental considerations to the fore. Of course, such commissions may have regard to or assist in the preparation of Environmental Impact Statements as part of a formal transboundary EIA process.

D. Custom

Though debate rages about the status in customary international law of various rules and principles of international environmental law, it is almost beyond argument that new binding customary norms have emerged in relation to protection of the environment. In the *Gab□íkovo-Nagymaros* case, the ICJ confirmed that new environmental norms and standards have emerged that must be taken into account when States consider projects or activities that might involve adverse environmental impacts.[226] The Court stated:

> Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon the environment. Owing to new scientific insights and to a growing awareness of the risks for mankind—for present and future generations—of pursuit of such interventions at an unconsidered and unabated pace, *new norms and standards have been developed, set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past.*[227]

The Court proceeded to recognise that many of these environmental norms and standards are included within the concept of sustainable development.[228]

The lack of hierarchical ranking among the factors relevant to equitable utilisation came under serious challenge in the deliberations of the General Assembly Working Group on the 1997 Convention from those "environmentally-minded delegations desirous of having the importance of the new standards and principles of international

226. Gab□íkovo-Nagymaros Project (Hung. v. Slovk.), 1997 I.C.J. 7 (Feb. 1997).
227. *Id.* at 78 (emphasis added).
228. *Id.*

environmental law adequately reflected in the articles of the Convention concerning equitable utilisation."[229] Indeed, the Finnish delegation proposed inserting an introduction to the *chapeau* for Article 6 of the Convention that stated:

> 1. Utilisation of an international watercourse in an equitable and reasonable manner within the meaning of Article 5 requires taking into account all relevant factors and circumstances *with a view to attaining sustainable development of the watercourse as a whole. Special regard should be given to vital human needs. Relevant factors and circumstances shall include:...*[230]

While this principle was strongly supported by those States that sought to introduce substantive standards for the environmentally sound application of the equitable utilisation principle, a number of delegations strongly objected to it,[231] and "it is most likely that their negative attitude was dictated by the fear that prominence might be given to environmental standards in the context of the equitable utilisation principle."[232]

Interestingly, Article 10(1) of the 1997 U.N. Watercourses Convention expressly provides that, "[i]n the absence of agreement *or custom to the contrary,* no use of an international watercourse enjoys inherent priority over other uses."[233] Article 10 concerns competing uses of water rather than the factors that must be considered in determining a regime for the equitable and reasonable utilisation of a watercourse. However, it could be argued that any use that is inconsistent with a rule or principle of customary international environmental law should be accorded less priority than any use consistent with customary international environmental law.

Even though Tanzi and Arcari suggest that "[o]ne can discern from the ILC *travaux préparatoires* that the word 'custom' in Article 10 is intended to refer to that formal source of international law known as 'local,' 'special' or 'regional' custom, which is much closer to the concept

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229. ATTILA TANZI & MAURIZIO ARCARI, THE UNITED NATIONS CONVENTION ON THE LAW OF INTERNATIONAL WATERCOURSES: A FRAMEWORK FOR SHARING 125-26 (2001). Such delegations included those from Finland, Portugal, Hungary, the Netherlands, and Germany. *Id.* at 126 n.127.

230. *Id.* at 125 n.125.

231. *See, e.g.*, Statement by the Chinese delegation, U.N. General Assembly, 6th Comm., Summary Record of the 16th Meeting, U.N. Doc. A/C.6/51/SR.16 (1996), at 2. *See also* TANZI & ARCARI, *supra* note 229, at 126.

232. TANZI & ARCARI, *supra* note 229, at 126.

233. U.N. Convention, *supra* note 1, at 707, art. 10(1) (emphasis added).

of tacit agreement than general customary law,"[234] the case could certainly be made that customary rules and principles may be considered in determining which uses of an international watercourse might be preferred. Therefore, environmental factors could be given added weight through the interpretation of emerging rules of customary international environmental law.

Further, as is the case with EIA, many emerging norms and principles of customary international environmental law are likely to enjoy informal implementation through the policies and practices of MDBs and other international development agencies. This is particularly true in the case of the duty to co-operate and its component duties to notify and consult. It must be borne in mind, however, that new or emerging norms of international environmental law will rarely, if ever, involve absolute obligations. For the purposes of the determination of an equitable regime of shared freshwater utilisation in particular, such environmental norms must be viewed through the dual prisms of due diligence and proportionality.[235] Therefore, the issue of adequate implementation of or compliance with norms such as the duty to prevent transboundary environmental harm must be considered having regard to the reasonableness of a State's behaviour in light of all the relevant circumstances. Only then might the fact of non-compliance be considered as a material factor in the determination of an equitable regime.

Possibly the single most important element in facilitating the effective consideration of environmental values within the equitable balancing process is the extent of the detailed elaboration of environmental rules and principles in recent years and their consequent degree of normative specificity and sophistication. In terms of substantive rules, one needs only to consider the ongoing, organic development of environmental due diligence standards that underpin the duty of prevention of significant harm and that could be found to exist in relation to a wide range of activities, of types of plant and equipment, of protective or preventive works, of technical studies and assessments, and so on. Similarly, one needs only to consider the comprehensive set of procedures and standards that could be found in relation to the conduct of an EIA. Such detailed procedures and standards now exist in relation to literally dozens of industry sectors and categories of activity as well as to various classes of habitat and

234. TANZI & ARCARI, *supra* note 229, at 137. On "local," "special," or "regional" custom, see Anthony A. D'Amato, *The Concept of Special Custom in International Law*, 63 AM. J. INT'L L. 211 (1969).

235. *See, e.g.*, Kroes, *supra* note 63, at 94–95, 97.

ecosystem. In terms of procedural rules, one has only to think of the detailed elaboration of guidance on the duty of watercourse States to consult in relation to the adoption of environmental measures under Article 21(3) of the 1997 Convention. It is contended that, by formalising the values, means, and procedures by which questions of environmental protection are to be considered within the framework of equitable utilisation, the parallel and independent development of a complex but interrelated corpus of environmental rules and principles performs a vital function in ensuring that such questions are indeed so considered. While disparaging what she considers to be the disproportionate, and possibly inequitable, pre-eminence of environmental considerations (over developmental considerations) within applications of the concept of sustainable development and in the allocation of transboundary natural resources, Fuentes suggests that it is possible "to explain the advantageous position that environmental concerns are gaining, as compared to the slow pace of the developmental aspects of sustainable development, by emphasizing the inadequacies of the international law-making process in the fields of international economic and cooperation law."[236] This suggests that the effectiveness of the international law-making process in the field of environmental law is to some degree responsible for the priority being accorded to environmental concerns.

236. Fuentes, *supra* note 152, at 112.