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General Principles of International Environmental Law in the Case Law of International Courts and Tribunals

Makane Moïse Mbengue and Brian McGarry

1 Consensus and Codification in International Environmental Law

Harmonization within the international legal order depends in large part on the views of international judges and arbitrators toward the existence and scope of general principles of law.¹ The judicial parlance of “principles” in international environmental law has centered on contemporary norms which have evolved from soft law instruments.² Such instruments may include resolutions and declarations issued by a diverse range of international organizations.³ These are often characterized as possessing aspirational language, lacking traditional compliance mechanisms, and reliant upon links to scientific and economic regimes as sources of direction and legitimacy.⁴ Nevertheless, a number of general principles codified in such instruments have been adopted in binding judicial decisions that have, in turn, progressively developed contemporary international environmental law.

The birth of this movement may be traced to the 1972 Stockholm Declaration,⁵ which pronounced in its Principle 21 a general obligation for each

1 See Mads Andenas and Ludovica Chiussi, ‘Cohesion, Convergence and Coherence of International Law’, in this volume; See further Antonio Cassese *International Law in a Divided World* (Clarendon Press 1986) 170–172.

2 For an illustration specific to the principle of sustainable development, see generally Jonathan Verschuuren, *Principles of Environmental Law: The Ideal of Sustainable Development and the Role of Principles of International, European, and National Environmental Law* (Nomos Verlagsgesellschaft 2003) 19–50.

3 See David Hunter, Julia Sommer, Scott Vaughan, ‘Concepts and Principles of International Environmental Law: An Introduction’, United Nations Environment Programme (1994) 2.

4 See Stephen Humphreys and Yoriko Otomo, ‘Theorizing International Environmental Law’, in Anne Orford and Florian Hoffmann (eds), *The Oxford Handbook of the Theory of International Law* (OUP 2016), 798. See further Patricia Birnie, Alan Boyle, Catherine Redgwell, *International Law and the Environment* (3rd edn, OUP 2009).

5 On the centrality of the Stockholm Conference to the development of international environmental law, see *Arbitration Regarding the Iron Rhine Railway (Belgium v Netherlands)* (2005)

State not to cause environmental damage to neighboring States. This norm would be echoed in Principle 2 of the 1992 Rio Declaration,⁶ which followed several milestones advancing the clarification of environmental principles, such as the 1985 Vienna Convention for the Protection of the Ozone Layer⁷ and the 1987 Montreal Protocol.⁸ Yet the Conference on Environment and Development held in Rio de Janeiro in June 1992 provided substantial momentum in the framing and development of international law. Instruments concluded in parallel, including the Program of Action Agenda 21⁹ and the Conventions on Climate Change (UNFCCC)¹⁰ and on Biological Diversity,¹¹ firmly planted principles such as sustainable development and the precautionary principle.¹²

However, these progressions recalled divisions between developed and developing States,¹³ which had first appeared in the environmental context during the 1972 Stockholm Conference. As discussed below, it would fall to international courts and tribunals, such as the ICJ in the *Gabčíkovo–Nagymaros* case,¹⁴ to address persistent disagreement as to the significance and interaction of principles concerning the environment and economic development.¹⁵

27 RIAA 35, 66 ('Since the Stockholm Conference on the Environment in 1972 there has been a marked development of international law relating to the protection of the environment'). http://legal.un.org/riaa/cases/vol_XXVII/35-125.pdf last accessed 9 April 2018.

6 UN Rio Declaration on Environment and Development (1992) 31 ILM 874.

7 Vienna Convention for the Protection of the Ozone Layer (adopted 22 March 1985, entered into force 22 September 1988) 1513 UNTS 293.

8 Montreal Protocol on Substances That Deplete the Ozone Layer (adopted 16 September 1987, entered into force 1 January 1989) 1522 UNTS 3.

9 UN Conference on Environment and Development: Agenda 21, UN Doc A/CONF.15/4 (1992).

10 UN Framework Convention on Climate Change (adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107.

11 Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79.

12 While the precautionary principle derives from international environmental law, it can also find application within other regimes over time; see Emmanuelle T. Jouannet, *A Short Introduction to International Law* (CUP 2014) 60–61.

13 See Report of the UN Conference on the Human Environment, UN Doc A/CONF.48/14 & Corr 1 (1972) 11 ILM 1416 ('Considerable emphasis was placed by speakers from developing countries upon the fact that for two-thirds of the world's population the human environment was dominated by poverty, malnutrition, illiteracy and misery [...]. The priority of developing countries was development. Until the gap between the rich and the poor countries was substantially narrowed, little if any progress could be made [...]. [S]upport for environmental action must not be an excuse for reducing development').

14 *Gabčíkovo–Nagymaros Project (Hungary/Slovakia)* [1997] ICJ Rep 7.

15 See Adil Najam, 'The South in International Environmental Negotiations' (1994) 31 International Studies 427, 441.

An illustrative development of the 1992 Rio Declaration is the principle of common but differentiated responsibilities (as stated in Principle 7), which subsequently appeared in instruments such as the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol.¹⁶ Like the polluter-pays principle, it requires developed States to take a leading role in addressing global environmental issues, given their disproportionate role in contributing to stresses upon the environment. While State practice and *opinio juris* regarding this norm may not be clearly sufficient for it to constitute a rule of customary international law, its utility as a general principle of law is demonstrated in the adoption of the aforementioned instruments.¹⁷

Some principles codified in the Rio Declaration have not emerged in a linear fashion from any single general principle or rule of general application. For example, Principle 14 concerns hazardous substances and activities which may be subject to a range of international instruments, yet it more broadly reflects the general principle that States should ensure the development and use of their natural resources in a sustainable manner.¹⁸ In this light, it is all the more remarkable when developments in the adoption of general principles occur, in the words of Judge Jennings, 'not quite instantly at any rate with surprising celerity'.¹⁹ Indeed, the principle of a duty to inform expanded from conference proposal to a recognized component of customary law within a mere 15 years.²⁰

One trend which has followed the 1992 Rio Conference has been the codification of general principles linking international environmental law to other specialized regimes. For instance, the central principle of equitable and reasonable utilization reflected in the 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses²¹ may serve to

16 Kyoto Protocol (adopted 11 December 1997, entered into force 16 February 2005) 2303 UNTS 162.

17 See further Sumudu A Atapattu, *Emerging Principles of International Environmental Law* (Transnational 2006) 424–426.

18 See, e.g. Makane M. Mbengue, 'Principle 14', in Jorge E. Viñuales (ed), *The Rio Declaration on Environment and Development: A Commentary* (OUP 2015), 384, 399.

19 Robert Jennings, 'General Course on Principles of International Law' (1967) 221 *Recueil des Cours* 335. Addressing international environmental law specifically, see Robert Jennings, 'Need for Environmental Court?' (1992) 22 *Environmental Policy and Law* 312; see further Malgosia Fitzmaurice, 'International Environmental Law as a Special Field', in Paula M. Pevato (ed), *International Environmental Law*, vol II (Ashgate 2003), 187–191.

20 See Daniel G. Partan, 'The "Duty to Inform" in International Environmental Law' (2006) 6 *Boston University International Law Journal* 43.

21 Convention on the Law of the Non-Navigational Uses of International Watercourses (adopted 21 May 1997, entered into force 17 August 2014) 36 ILM 700. See, e.g. Articles 7 and 12 of the Convention. The determination of "equitable use" in practice requires a balance of different interests and a consideration of all relevant factors,

“operationalize” the principle of sustainable development.²² The Convention provides a framework for the management and protection of shared watercourses by providing general principles and rules that may be tailored to suit the conditions of specific watercourses and the needs of States sharing these watercourses.²³ The ICJ in *Gabčíkovo–Nagymaros* confirmed equitable and reasonable utilization as a rule of customary international law.²⁴ In light of the limited number of accessions the Convention had attracted since its adoption four months prior, the Court’s Judgment might have more coherently identified this as a general principle of law.

Cross-regime principles are also evident in instruments codifying the law of the sea. While the 1982 UN Convention on the Law of the Sea (UNCLOS)²⁵ provides a number of specific rules governing the protection of the marine environment, it also incorporates the broader principle of the common heritage of mankind in its provisions concerning the use of the international seabed.²⁶

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- including the physical and climatic conditions, the consumptive use of the water in several areas of the watercourse, and the character and rate of return flows. See Stephen C. McCaffrey, *The Law of International Watercourses* (2nd edn OUP 2007) 387.
- 22 Judge Weeramantry viewed sustainable development as ‘more than a mere concept but as a principle with normative value [...] fundamental to the determination of the competing interest’ in the case. *Gabčíkovo–Nagymaros*, Separate Opinion of Judge Weeramantry, 1 (n 14). See also Judgment, 77–78. See further Patricia K. Wouters and Alistair S. Reiu-Clarke, ‘The Role of International Water Law in Promoting Sustainable Development’ (2001) 12 *Water Law* 281, 283. The principles of reasonable and equitable use and sustainable development bear some analytical similarities in application, such as a balancing of interests. See Marjon Kroes, ‘The Protection of International Watercourses as Sources of Fresh Water in the Interest of Future Generations’, in Edward H.P. Brans and others (eds). *The Scarcity of Water: Emerging Legal and Policy Responses* (Kluwer 1997), 83.
- 23 See Watercourses Convention, Article 3. See also Makane M. Mbengue and Susanna Waltman, ‘Farmland Investments and Water Rights: The Legal Regimes at Stake’ (2015) International Institute for Sustainable Development 31.
- 24 *Gabčíkovo–Nagymaros* (n 14), 54, 56, 80.
- 25 UN Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 397.
- 26 On the diverse application of the principle of the common heritage of mankind in other *res communis* regimes (such as under the Preamble to the 1959 Antarctic Treaty and Article 1 of the 1967 Outer Space Treaty), see Malcolm N. Shaw, *International Law* (8th edn, CUP 2017) 470; Gbenga Oduntan, *Sovereignty and Jurisdiction in the Airspace and Outer Space: Legal Criteria for Spatial Delimitation* (Routledge 2011) 191 (‘Analogies of this principle can be found in the legal regime governing virtually all common spaces’). On the role of this and other general principles of law in the law of outer space, see Jochen A. Frowein, ‘Customary International Law and General Principles Concerning Environmental Protection in Outer Space’, in Karl-Heinz Böckstiegel (ed), *Environmental Aspects of Activities in Outer Space: State of Law and Measures of Protection* (Carl Heymanns Verlag 1990) 163–167; Robert Jennings, ‘Customary Law and General Principles of Law as Sources of Space Law’, in *ibid* 149–152; Dietrich Rauschning, ‘Customary International Law and

This principle removes that area from the ambit of territorial claims,²⁷ but encourages environmental preservation and (in the context of UNCLOS) exploitation thereof to the benefit of those States least likely to have the means to do this directly.²⁸ The principle was recognized by some States well before the adoption of UNCLOS²⁹ and confirmed in a 1970 UN Resolution,³⁰ and it continues to be refined in light of judicial development. This includes both direct reference³¹ and statements such as the ICJ's dictum in *Nuclear Weapons* that 'the environment is not an abstraction', but rather 'represents the very health of human beings, including generations unborn'.³²

General Principles of International Law Concerning the Protection of Outer Space from Pollution?', in *ibid* 181–186.

27 See generally UN General Assembly, 22nd Session, Agenda Item 92, UN Docs A/C.1/PV.1515, A/C.1/PV.1516.

28 See further *Responsibilities and Obligations of States Sponsoring Persons and Entities with respect to Activities in the Area*, Advisory Opinion, ITLOS Seabed Disputes Chamber (2011). https://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/adv_op_010211.pdf last accessed 9 April 2018.

29 See, e.g. Statement made by the Belgian delegate during the 1,788th meeting of the First Commission of the General Assembly during its 25th session in 1970, discussing the Report of the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction, 22, as reprinted in *The Law of the Sea: Concept of the Common Heritage of Mankind: Legislative History of Articles 133 to 150 and 311(6) of the United Nations Convention on the Law of the Sea*, UN Division for Ocean Affairs and the Law of the Sea (United Nations 1996), 186. On the potential application of this principle to high seas fisheries, see Judge Oda's perspectives during early and late stages of the negotiations, see, respectively, Shigeru Oda, 'New Directions in the International Law of Fisheries' (1973) 17 *Japanese Annual of International Law* 89; Shigeru Oda, 'Sharing of Ocean Resources: Unresolved Issues in the Law of the Sea' (1981) 3 *Journal of International and Comparative Law* 12.

30 UNGA Resolution 2749 (XXV), Declaration of Principles Governing the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction (12 December 1970). See further Dire Tladi, 'The Common Heritage of Mankind and the Proposed Treaty on Biodiversity in Areas beyond National Jurisdiction: The Choice between Pragmatism and Sustainability' (2015) 25 *Yearbook of International Environmental Law* 113, 114; Rüdiger Wolfrum, 'Common Heritage of Mankind', in Rudolf Bernhardt (ed), *Comparative Law. Encyclopedia of Public International Law* (Elsevier Science 1989), 68: 'the common heritage principle has its main impact with respect to the establishment of an international administration for areas open to the use of all states (international commons)'.

31 See *Activities in the Area* (n 28) 25, 45, 48, 53, 64–65.

32 *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion [1996] 1CJ Rep 241. Nevertheless, it may be seen that no general principle requires states to protect and preserve the environment *per se*. See Catherine Redgwell, 'Transboundary Pollution: Principles, Policy and Practice', in Shunmugam Jayakumar and others (eds), *Transboundary Pollution: Evolving Issues of International Law and Policy* (Edward Elgar 2015), 11.

From the Stockholm and Rio conferences and other codification efforts, a range of general principles of international environmental law have been identified. Beyond those addressed above, these include, *inter alia*, the principles of prevention and of good neighborliness and international cooperation.³³ Nevertheless, the development of international law through codification conferences is a time-consuming process that justifies the preference – and, in the case of environmental protection, the necessity – of a “common law approach”, wherein framework principles and guidelines attract consensus and later achieve elaboration through jurisprudence.³⁴ Conventional means of international law-making may struggle to adjust to the quickly evolving economic, scientific, and social contexts in which global environmental crises develop.³⁵ Indeed, agreement on ‘hard law’ instruments can require a degree of scientific certainty that may be difficult to attain.³⁶

As set out below, many general principles of international environmental law, such as those concerning good neighborliness and abuse of rights, remain so general as to be too imprecise for courts and tribunals to apply confidently.³⁷ Indeed, even those principles pronounced in earlier case law – such as the *Trail Smelter* tribunal’s dictum that States have an obligation of best efforts to avoid damaging other territories³⁸ – were seen in the Stockholm era to require further development and normative anchoring in order to produce concrete legal obligations.³⁹

33 See Philippe Sands and others, *Principles of International Environmental Law* (4th edn, CUP 2018) 197.

34 See further Harald Hohmann, *Precautionary Legal Duties and Principles of Modern International Environmental Law. The Precautionary Principle: International Environmental Law Between Exploitation and Protection* (Graham & Trotman 1994) 335–336.

35 See Günther Handl, ‘Environmental Security and Global Change: The Challenge to International Law’ (1990) 1 *Yearbook of International Environmental Law* 4. See further Robert Kolb, ‘General Principles of Procedural Law’, in Andreas Zimmermann and others (eds), *The Statute of the International Court of Justice: A Commentary* (2edn, OUP 2012) 900 (‘To some extent, the interpretation performed by the Court is always a creative act, since there is no understanding of a text without some elements of legal creativeness’); Maarten Bos, ‘The Recognized Manifestations of International Law: A New Theory of Sources’ (1977) *GYIL* 20, 59 (‘Judicial decisions emanating from authoritative judges are to be considered as recognized manifestations of international law provided they are of an innovating character or shed new light on existing law, and provided also that they are capable of generalization’). See generally Clive Parry, *The Sources and Evidences of International Law* (MUP 1965).

36 See Birnie, Boyle, Redgwell, *International Law and the Environment* (n 4) 17.

37 See Ludwik Teclaff, ‘The Impact of Environmental Concern on the Development of International Law’, in Ludwik Teclaff and others (eds), *International Environmental Law* (Praeger 1974), 229.

38 See Jacques Ballenegger, *La Pollution en Droit International* (Vaudoise 1975) 67 ff.

39 See Winfried Lang, ‘UN-Principles and International Environmental Law’ (1999) 3 *Max Planck Yearbook of United Nations Law* 157–158.

2 Inarticulate Speech of the Earth

Given its significant reliance upon applicable general principles, international environmental law has in practice been the subject of some confusion as to the legal character and weight of its sources. The Award in the *Iron Rhine* arbitration demonstrates the difficulty of systematizing these sources and assigning them a coherent nomenclature. After addressing rules applicable to the parties' dispute by virtue of treaties in force, the tribunal observed:

Further, international environmental law has relevance to the relations between the Parties. There is considerable debate as to what, within the field of environmental law, constitutes "rules" or "principles"; what is "soft law"; and which environmental treaty law or principles have contributed to the development of customary international law. Without entering further into those controversies, the Tribunal notes that in all of these categories "environment" is broadly referred to as including air, water, land, flora and fauna, natural ecosystems and sites, human health and safety, and climate. The emerging principles, whatever their current status, make reference to conservation, management, notions of prevention and of sustainable development, and protection for future generations.⁴⁰

Such uncertainty is perhaps fitting in light of nearly a century of debate as to the definition of 'general principles of law'.⁴¹ According to one school of thought, general principles – as opposed to the classical understanding of customary international law – may be seen to direct, rather than emerge from, State practice.⁴² Nevertheless, as observed by Judge Waldock, 'there will always be a tendency for a general principle of national law recognized in international

40 *Award in the Arbitration regarding the Iron Rhine* 66 (n 5).

41 See, e.g. Gerald Fitzmaurice, 'The General Principles of International Law Considered From the Standpoint of the Rule of Law' (1957) 92 *Recueil des Cours* 1; Géza Herczegh, (1969) *General Principles of Law and the International Legal Order* (Akadémiai Kiadó 1969) 5; Bin Cheng, *General Principles of Law as Applied by International Courts and Tribunals* (Stevens & Sons 1953); Fabián Raimondo, *General Principles of Law in the Decisions of International Criminal Courts and Tribunals* (Martinus Nijhoff Publishers 2007); Giorgio Gaja (2007) 'General Principles of Law', *Max Planck Encyclopedia of Public International Law*.

42 See Robert Kolb, *Theory of International Law* (Hart 2016) 128; see further Daniel Bodansky, *The Art and Craft of International Environmental Law* (Harvard University Press 2010) 99 ('To some degree, custom focuses on the actual behavior of states, whereas general principles find their basis in logic and reason. In practice, however, the distinction between customary norms and general principles is often blurred').

law to crystallize into customary law'.⁴³ In practice, however, some norms which appear to satisfy the requirements of customary international law might be better understood as general principles of law.⁴⁴

This debate originated with the codification of "general principles of law" within Article 38(1)(c) of the Statute of the Permanent Court of International Justice (PCIJ), though the phrase appeared in the *compromis* of prior tribunals⁴⁵ and the 1907 draft statute for what would have been the International Prize Court.⁴⁶ During the 1920 deliberations of the Committee of Jurists (which was charged with proposing a draft Statute for the new Court), Descamps proposed a reference to 'the rules of international law recognized by the legal conscience of civilized peoples', clearly implying the application of natural law concepts.⁴⁷

As some applicable principles in environmental disputes may have roots in antiquity, this reliance upon natural law may be justifiable.⁴⁸ For example, the principle of equitable utilization of shared natural resources may be viewed in light of that of *sic utere tuo ut alienum non laedas*, a norm of Roman private law.⁴⁹ This approach has found expression in the voice of Judge Cançado

43 Humphrey Waldock, 'General Course on Public International Law' (1962) 106 *Recueil des Cours* 5, 62. See further Alain Pellet, 'Article 38', in *The Statute of the International Court of Justice: A Commentary* (n 35) 852 (considering general principles of law as 'transitory' insofar as their repeated use at the international level transmutes them into custom, thus rendering unnecessary any recourse to the underlying general principles).

44 See generally Bruno Simma and Philip Alston, 'The Sources of Human Rights Law: Custom, Jus Cogens, and General Principles' (1988–1989) 12 *AYIL* 82, (referring to the field of human rights law).

45 In the *Fabiani* case between France and Venezuela, the arbitrator utilized municipal public law when addressing the responsibility of the State for the acts of its agents, as well as general principles of law concerning the assessment of damages. See Award of 31 July (1905) 10 *RIAA* 83–139. In the *Russian Indemnity* case, the Permanent Court of Arbitration applied the principle of moratory interest on debts. See Award, *Hague Court Reports* (1912) 297.

46 Draft treaty for the establishment of an international prize court (1907), Article 7 ('general principles of justice and equity'). See also the European Convention for the Protection of Human Rights and Fundamental Freedoms, Article 7 [2]; 213 *UNTS* 262.

47 See James Crawford, *Brownlie's Principles of Public International Law* (8th edn, OUP 2012) 15. On the danger of analogy to municipal systems, see generally Hugh Thirlway 'Concepts, Principles, Rules and Analogies: International and Municipal Legal Reasoning' (2002) 294 *Recueil des cours* 273, 268–405; 'The Law and Procedure of the International Court of Justice (1960–89): General Principles and Sources of Law' 60 *BYIL* 58.

48 See Edith Brown Weiss, 'International Environmental Law and the Natural Law', in David Deener (ed), *International Law of the Environment* (Pontchartrain Press 1975) 8.

49 The International Law Association recognised this as a general principle of law in 1955. See Winfried Lang, 'UN-Principles and International Environmental Law' (1999) 3 *Max Planck Yearbook of United Nations Law*, 160.

Trindade's Separate Opinion in *Pulp Mills*, in which he referred to ethical concepts derived from 'the universal juridical conscience [...] as the ultimate material "source" of all law'.⁵⁰

However, the majority view of 'general principles' under Article 38 of the Statute remains reflected in the vision of Root and Phillimore (the authors of the text ultimately adopted by the Committee), who considered 'general principles' in terms of rules accepted in the domestic laws of all civilized States.⁵¹ The utility of this paradigm is sensible in light of the relative immaturity of international law in 1920 vis-à-vis domestic legal systems, permitting the PCIJ to adapt certain elements of better developed constructs.⁵² This approach has also found clearer expression in the *lex specialis* of international criminal law, as applicable before the International Criminal Court.⁵³

Regardless of one's predisposition toward the vision of Root and Phillimore, it must be recalled that international courts and tribunals do not 'transmute' municipal law into international law. Their consideration of general principles of law may involve resort to the domestic laws of a diverse range of States to ascertain evidence that a commonly followed principle is seen as just.⁵⁴ As observed by Judge McNair, 'the duty of international tribunals in this matter is to regard any features or terminology which are reminiscent of the rules and

50 Separate Opinion of Judge Cançado Trindade, *Pulp Mills on the River Uruguay (Argentina v Uruguay)* [2010] ICJ Rep 14, 156.

51 See *Procès-verbaux* (1920), 316, 335, 344. See further Paul Guggenheim 'Contribution à l'histoire des sources du droit des gens' (1958) 94 *Recueil des Cours* 78; Robert Y. Jennings and Arthur Watts (eds), *Oppenheim's International Law* (Longman 1996) 37 ('The intention is to authorize the Court to apply the general principles of municipal jurisprudence, in particular of private law, in so far as they are applicable to relations of States'); Edith Brown Weiss and others (eds), *International Environmental Law and Policy* (Aspen 1998) 188 (distinguishing on this basis general principles of law under Article 38(1)(c) from 'general principles of international law'). See generally Hersch Lauterpacht, *Private Law Sources and Analogies of International Law* (Longmans, Green & Co 1927); Peter Malanczuk, *Akehurst's Modern Introduction to International Law* (George Allen & Unwin 1997).

52 See Grigory Tunkin, 'General Principles of Law' (1968) *Recueil des Cours* 1, 23–26, 356–358. See further Vaughan Lowe, *International Law* (OUP 2007) 87–88 ('National and international law are not separate systems, isolated one from the other. They are deeply interconnected, and the techniques and principles and practices of national laws permeate international law. The reference to "general principles of law" in the ICJ Statute reflects the fact that although it routinely applies sources such as treaty and customary international law which arise relatively rarely in municipal courts, the International Court is still a member of the family of tribunals which together maintain the Rule of Law in the settlement of disputes. It may be International; but it is still a Court').

53 See Article 21(1)(c) of the Rome Statute ('general principles of law derived by the Court from national laws of legal systems of the world').

54 See Alain Pellet, 'Article 38' (n 35) 840.

institutions of private law as an indication of policy and principles rather than as directly importing these rules and institutions'.⁵⁵ In this light, the debate as to whether general principles derive from municipal law or from higher precepts is a question of evidence as to the existence of a principle, rather than a question of its 'source'.

Early modern arbitral case law sought at times to divine the distinction between legal rules and general principles. The Umpire in the *Gentini* arbitration found in 1903 that the former is 'essentially practical and, moreover, binding', whereas the latter 'expresses a general truth, which guides our action, serves as a theoretical basis for the various acts of our life, and the application of which to reality produces a given consequence'.⁵⁶ The view that general principles, unlike rules, do not dictate specific actions required to fulfill them,⁵⁷ would seem to align with the ICJ's usage of general principles in *North Sea Continental Shelf* for the purpose of guiding the parties toward achieving a mutually agreed solution which reflects those principles.⁵⁸ Nevertheless, specialized principles within international environmental law such as sustainable development may in practice suggest a certain approach without prescribing specific actions.⁵⁹

The PCIJ had recourse to general principles in cases such as *Chorzów Factory*, stating that 'it is a principle of international law, and even a general conception of law, than any breach of an engagement involves an obligation to make reparation'.⁶⁰ The PCIJ would also resort to general principles of preclusion,⁶¹ good faith,⁶² and a range of other legal concepts which did not expressly derive

55 *International Status of South West Africa*, Separate Opinion of Judge McNair [1950] ICJ Rep 128, 148.

56 See *Gentini Case (Italy v Venezuela)*, in Jackson and Sherman Doyle Ralstron, *Venezuelan Arbitrations of 1903* (Government Printing Office, 1904) 720, 725.

57 See Ronald Dworkin, *Taking Rights Seriously* (Harvard University Press 1977) 24, 26 ('[A principle] states a reason that argues in one direction, but does not necessitate a particular decision'); Daniel Bodansky, 'The United Nations Framework Convention on Climate Change: A Commentary' (1993) 18 *Yale Journal of International Law* 451, 501 ('[Principles] embody legal standards, but the standards they contain are more general than commitments and do not specify particular actions').

58 *North Sea Continental Shelf (Germany/Netherlands; Germany/Denmark)* [1969] ICJ Rep 3.

59 See Pierre-Marie Dupuy, 'Formation of Customary International Law and General Principles', in Daniel Bodansky, Jutta Brunée, Ellen Hey (eds), *The Oxford Handbook of International Environmental Law* (OUP 2007), 461–462 (framing sustainable development as a normative matrix', rather than a simple rule of principle).

60 *Factory at Chorzów (Germany v Poland)* (Merits) (1928) PCIJ Ser A no 17, 29.

61 *Legal Status of Eastern Greenland (Denmark v Norway)* (1933) PCIJ Ser A/B no 53, 52 ff, 62, 69.

62 See *Free Zones* (1930) PCIJ Series A No 24, 12; and (1932) Ser A/B, no 46, 167. This principle can be traced to antiquity; Grotius, citing Cicero and Aristotle, called it the principle that

from treaty or customary obligations.⁶³ While the ICJ has often avoided express reference to the source of certain principles it has recognized in its case law, when it has done so it has at times cited a principle's prevalence in municipal law. Thus, the Court in *Corfu Channel* considered circumstantial evidence and observed that 'this indirect evidence is admitted in all systems of law',⁶⁴ while in *Barcelona Traction* it applied reasoning analogical to the general conception of limited liability companies found in domestic legal systems.⁶⁵

While the principles applied by the Court in this manner may have broad application, some possess particular salience for the development of international environmental law. Thus, in the *River Meuse* case before the PCIJ, Judge Hudson considered the principle of equity (which would soon thereafter be applied in the *Trail Smelter* arbitration)⁶⁶ to be tantamount to equality, and observed that under 'Article 38 of the Statute, if not independently of that Article, the Court has some freedom to consider principles of equity as part of the international law which it must apply'.⁶⁷ Additionally, the ICJ in *Corfu Channel* relied on 'general and well-recognized principles' such as 'elementary considerations of humanity',⁶⁸ which have before and since been reflected in treaty preambles⁶⁹ and UN General Assembly resolutions.⁷⁰ Such considerations are

sustains States and preserves peace between them. See Murray G. Forsyth and others, *The Theory of International Relations: Selected Texts from Gentili to Treitschke* (Aldine Transaction 2008), 82.

63 See, e.g. *Article 3, Paragraph 2, of Treaty of Lausanne* (Advisory Opinion) (1925) PCIJ Ser B no 12, 32; *Case concerning certain German interests in Polish Upper Silesia (Germany v Poland)* (1925) PCIJ Ser A no 6, 20; *The Electricity Company of Sofia and Bulgaria (Belgium v Bulgaria)* (1939) PCIJ Ser A/B no 79, 199.

64 *Corfu Channel Case (UK v Albania)* (Merits) [1949] ICJ Rep, 18.

65 *Barcelona Traction (Belgium v Spain)* (Merits) [1970] ICJ Rep 3, 32–33.

66 *Trail Smelter (United States v Canada)* (1938 and 1941) 3 RIAA 1905

67 *Diversion of Water from Meuse (Netherlands v Belgium)* (1937) PCIJ Ser A/B no 70, 77; *ibid*, Individual Opinion of Judge Hudson, 76–77. See also *Continental Shelf (Tunisia/Libya)* [1982] ICJ Rep 18, 60 (describing the principle of equity as a 'direct emanation of the idea of justice' and a 'general principle directly applicable as law' which should be applied as part of the corpus of international law 'to balance up the various considerations which it regards as relevant in order to produce an equitable result'). See further Sands and others (n 33) 226.

68 *Corfu Channel* (n 64), 22.

69 See, e.g. Hague Convention Concerning the Laws and Customs of War on Land, 1907, preamble (referring to 'principles of the law of nations, derived from the usages established among civilized peoples, from the laws of humanity, and from the dictates of the public conscience'). ICRC database <https://ihl-databases.icrc.org/ihl/INTRO/195> Last accessed 9 April 2018.

70 See, e.g. UNGA Res 1653 (XVI) (24 November 1961) Resolution on the Prohibition of the Use of Nuclear Weapons for War Purposes.

connected to general principles of law and equity,⁷¹ and have found expression (though without specific clarification as to their source) within the corpus of humanitarian law.⁷²

The norms which emerge from the recognized sources of international law do not necessarily bear the distinctions of these respective sources. Indeed, 'source' in this sense may be understood as the location of the substantive content of international law, without the need to distinguish such content's relative weight in light of its particular source⁷³ – an approach perhaps supported by special reference to 'subsidiary means' in Article 38(1)(d) of the Statute.

Principles recognized under general international law, such as the obligation to settle disputes peacefully, do not necessarily require separate elaboration under international environmental law.⁷⁴ Yet confusion can persist as to the role of general principles of law vis-à-vis 'general international law', as observed by Judge Ad Hoc Dugard in the *Certain Activities* case.⁷⁵

The nature of general principles of law and their somewhat translucent application in international dispute settlement practice confirms the inappropriateness of rigid categorization among the sources codified in Article 38 of the ICJ Statute.⁷⁶ It is notable in this respect that one of the few points of agreement among the Committee of Jurists on this topic was that the PCIJ must be granted the power to develop and refine principles of international

71 Crawford, *Brownlie's Principles of Public International Law* (n 47) 46.

72 See ILC, Report of the International Law Commission on the work of its 68th session (A/71/100), October – November 2016, 33 (elaborating upon draft article 6, which states 'Response to disasters shall take place in accordance with the principles of humanity, neutrality and impartiality, and on the basis of non-discrimination, while taking into account the needs of the particularly vulnerable'). See further *Prosecutor v Tadić*, Decision on the Defence Motion for Interlocutory Appeal on Jurisdiction (1995) ICTY Appeal Chambers [109].

73 William R. Slomanson, *Fundamental Perspectives on International Law* (West Publishing 1995) 9.

74 See Winfried Lang, 'UN-Principles and International Environmental Law' (1999) 3 Max Planck Yearbook of United Nations Law 169.

75 [2015] ICJ Rep 665, Separate Opinion of Judge Dugard, 4–5, (considering general principles of law to largely constitute procedural obligations, but noting that reference to 'general international law in *Pulp Mills* (n 50) '[c]ertainly [...] includes both customary international law and general principles of law'). For the proposition that general principles may not be construed as separate legal obligations, see further Mavrommatis Jerusalem Concessions (1925) PCIJ Ser A no 5 ('[T]he Court, however, considers that Protocol XII is complete in itself, for a principle taken from general international law cannot be regarded as constituting an obligation contracted by the Mandatory except in so far as it has been expressly or implicitly incorporated in the Protocol').

76 See Crawford, *Brownlie's Principles of Public International Law* (n 47) 35, 37.

jurisprudence.⁷⁷ While such principles can be traced to State practice, they may be appropriately viewed as long-accepted abstractions which no longer require direct connections to State practice.⁷⁸

In this sense, whether or not general principles of international environmental law have evolved from State practice strictly speaking or through the judicial application of less traceable concepts is a question of little practical value. The purely academic character of this debate as concerns international environmental law is due to a notable lack of extant specialized institutions that apply norms possessing a “legal” character, and as well because the relevant norms in this field arguably lack sufficiently defined content for the purpose of directly guiding State conduct.⁷⁹ Moreover, since the main corpus of international environmental law is referred to as ‘principles’ because it largely emerged from universal soft law instruments (such as the Rio Declaration), in this sense these norms may be viewed as a body of customary international law.⁸⁰ These ‘principles’ can of course find expression as well in treaties in force, which may include their modification for the purposes of regional agreements.⁸¹

It should be noted that the Advisory Committee of Jurists agreed that the general principles codified in Article 38(1)(c) of the PCIJ Statute existed to serve the PCIJ and international tribunals when no rule of treaty or custom was available to settle the case, thus rendering a finding of *non liquet* improbable.⁸²

77 Ibid 34.

78 Ibid 37.

79 See generally Daniel Bodansky, ‘Customary (And Not So Customary) International Environmental Law’, in Paula M. Pevato (ed), *International Environmental Law*, vol 1 (Ashgate 2003), 105.

80 See Mbengue and Waltman, ‘Health and International Environmental Law’ (n 23) 9.

81 See Laurence Boisson de Chazournes, *Fresh Water in International Law* (OUP 2013) 147 (concerning the protection of vital human needs, in the context of the 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses and the 2008 ILC Draft Articles on the Law of Transboundary Aquifers). For example, the provisions of the Southern African Development Community’s 2000 Revised Protocol on Shared Watercourses may be seen to mirror those of the UN Watercourses Convention, particularly as regards its general principles and definitions. Additionally, the Preamble of the 2002 Waters Charter of the Senegal River expressly refers to the applicability of general principles and customary principles of international water law as codified in the Watercourses Convention. See generally Makane M. Mbengue, ‘The Senegal River Legal Regime and its Contribution to the Development of the Law of International Watercourses in Africa’, in Laurence Boisson de Chazournes, Christina Leb, Mara Tignino (eds), *International Law and Freshwater: The Multiple Challenges* (Edward Elgar 2013).

82 See Anthea Roberts and Sandesh Sivakumaran, ‘The Theory and Reality of the Sources of International Law’, in Malcolm Evans (ed), *International Law* (5th edn, OUP 2018).

During the Committee's deliberations, President Descamps was among those members who linked the necessity of this approach to a broader conception of the international judicial function:

The principles which must guide the judge, in the solution of the disputes submitted to him, are of vital importance [...] it seems to me that, directly we try to create rules of this kind to define and at the same time limit the powers of judges, we are reproached with making the administration of International Justice arbitrary. Such approach in our opinion implies a misunderstanding of present conditions, of international law, and the duties of a judge [...] The only question is, – how to make unerring rules for the judge's guidance.⁸³

This gap-filling function is evident in the PCIJ's resort to general principles in its jurisprudence, notably as concerns the principle of reparation in *Chorzów Factory*.⁸⁴ It is demonstrated as well as in the early case law of the ICJ, notably in cases such as *Fisheries*,⁸⁵ *South West Africa*,⁸⁶ and *Nuclear Tests*.⁸⁷ Yet general principles have also been applied by the Court and international arbitrators in instances where rules of treaty or customary law were available,⁸⁸ thus demonstrating that their function is not limited in practice to filling lacunae.

83 Procès-Verbaux of the Proceedings of the Committee, June 16th-July 24th 1920, with Annexes, Permanent Court of International Justice (ser.D), 322–323. See also comment by Hagerup at ibid 296 ('[T]he Court must have the power to apply principles to fill the gaps in positive law') (echoing the views of de Lapradelle); comment by Ricci-Busatti at ibid, 315. For an overview of the judicial function to develop international law, see Brian McGarry, 'The Development of Custom in Territorial Dispute Settlement' (2016) *Journal of International Dispute Settlement* 339, 358–361.

84 See *Factory at Chorzow* (n 60); See also *Corfu Channel* (n 64) 22. On the PCIJ's identification of and reliance upon teleological principles of interpretation, see *Jurisdiction of the Courts of Danzig*, Advisory Opinion (1928) PCIJ Ser B no 15; *Serbian Loans* (1929) PCIJ Series A No 20; *Brazilian Loans* (1929) PCIJ Series A no 21.

85 See *Fisheries (UK v Norway)* [1951] ICJ Rep 116, 132.

86 See *South West Africa (Ethiopia v South Africa; Liberia v South Africa)* (Second Phase) [1966] ICJ Rep 6, 48. See also *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide*, Advisory Opinion [1951] ICJ Rep 15, 23. See further *Interpretation of Peace Treaties with Bulgaria, Hungary and Romania*, Advisory Opinion [1950] ICJ Rep 221, 229; *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution* (Advisory Opinion) [1970] ICJ Rep 16.

87 See *Nuclear Tests (Australia v France)* [1974] ICJ Rep 253, 268; *Nuclear Tests (New Zealand v France)* [1974] ICJ Rep 457, 473.

88 See, e.g. *North Sea*, 46 ('[I]n the present case it is not the fact either that rules are lacking, or that the situation is one for the unfettered appreciation of the Parties [...] The Court has to indicate to the Parties the principles and rules of law in the light of which

Indeed, it is possible to conceptualize general principles under Article 38 of the ICJ Statute as a novel 'secondary' source of law, which leaves it to international courts and tribunals (rather than States) to pronounce such principles through an inductive approach. This embrace of judge-made law not only accords with the judicial aversion to *non liquet*, but may also bear particular salience in the development of international environmental law.⁸⁹

Regardless of their origins, general principles of international environmental law have often been treated in practice within a normative matrix, rather than as discretely applicable customs. In particular, a number of such principles have been shown to demonstrate links between substantive and procedural obligations. For example, the obligations of equitable and reasonable utilization and prevention of transboundary harm are closely related to procedural duties concerning notification, consultation and negotiation, and the exchange of information.⁹⁰ The significance of these duties of cooperation was identified by the Court in *Gabčíkovo–Nagymaros*⁹¹ and *Pulp Mills*,⁹² and their status as general principles has also been the subject of attention by investment arbitration tribunals.⁹³

the methods for eventually effecting the delimitation will have to be chosen') (n.58); *Abaclat and Others v Argentine Republic*, Dissenting opinion of Georges Abi-Saab, 59–69, 2011 ICSID Case No. ARB/07/5 (concerning the interpretation of silence). For other examples of general principles identified in international investment practice, see *AMCO v Republic of Indonesia* ('the full compensation of prejudice, by awarding to the injured party the *damnum emergens* and *lucrum cessans* is a principle common to the main systems of municipal law, and therefore, a general principle of law which may be considered as a source of international law').

89 See Birnie, Boyle, Redgwell, *International Law and the Environment* (n 4) 19.

90 See Owen McIntyre, 'The Proceduralisation and Growing Maturity of International Water Law' 2010 22 *Journal of Environmental Law* 475; *Pulp Mills* (n 50) 488–489; See generally Christina Leb, *Cooperation in the Law of Transboundary Water Resources* (CUP 2013).

91 *Gabčíkovo–Nagymaros*, Judgment (n 14) 77–78. See also *ibid*, Separate Opinion of Vice-President Weeramantry, Part A.

92 Judgment, 48–49. See further *ibid*, 55–56, 71. Stressing the role of institutional arrangements in accordance with 'the principle of speciality', see *ibid* 53. See further Thomas Franck, *Fairness in International Law and Institutions* (Clarendon 1995) 81–82 (referring to equitable and reasonable utilization as among 'sophist principles [... which] usually require an effective, credible, institutionalized, and legitimate interpreter of the rule's meaning in various instances').

93 See, e.g. *Grand River Enterprises Six Nations, Ltd., et al v United States of America*, ICSID Case No. ARB/10/5, Award (12 January 2011), 54 (acknowledging that a customary principle may exist which requires governments to consult indigenous peoples on government actions significantly affecting their use of their territory). See further Laurence Boisson de Chazournes and Brian McGarry, 'Constitutional Law and the Settlement of Investor-State Disputes: Some Interplays', in Charles C. Jalloh and Olufemi Elias (eds), *Shielding Humanity: Essays in International Law in Honour of Judge Abdul G. Koroma* (Brill 2015), 236–238.

Such judicial elaboration is arguably essential to the identification and development of general principles of law, particularly within international environmental law. In this light, it is worth recalling that by including general principles in the applicable law provisions of the PCIJ Statute, the Advisory Committee of Jurists sought to not only avoid a finding of *non liquet*, but to also restrain the new Court from reaching arbitrary decisions *ex aequo et bono*:

The President added that far from giving too much liberty to judges' decision, his proposal [...] would limit it. As a matter of fact it would impose on the judges a duty which would prevent them from relying too much on their own subjective opinion it would be incumbent on them to consider whether the dictates of their conscience were in agreement with the conception of justice of civilized nations.⁹⁴

Despite the different contours of general principles in the *lex specialis* of international environmental law vis-à-vis those found throughout general international law, this function of avoiding arbitrariness in judicial decision-making benefits all such principles. As such, it ensures at least a minimum degree of coherence in the nomenclature of "general principles".

3 Harmonization and Empowerment in Recent Judicial Dialogue

The 21st century case law of the ICJ and a range of other international tribunals has made significant strides toward harmonizing the identification and application of general principles in international environmental disputes, while making productive use of earlier judicial and arbitral precedents. Indeed, international dispute settlement has played a substantial role in calling attention to the need for the initial development of international environmental law.

Perhaps the earliest example of this phenomenon is the 19th century *Behring Fur Seal* case.⁹⁵ By approaching the dispute as a matter concerned with

94 See *ibid* 311. See also *ibid* 318–319, 322 ('[D]irectly we try to create rules of this kind [principles] to define and at the same time limit the powers of judges [...]'), 323. See further Gerald Fitzmaurice, 'The General Principles of International Law Considered from the Standpoint of The Rule of Law' (n 41), 56: [I]nternational tribunals have seldom if ever pronounced a non liquet, or had recourse to a barren residual rule of the kind mentioned above; but, rather, have decided the case by reference to, or with the help of analogies drawn from, general and natural law principles'.

95 *Award between the United States and the United Kingdom Relating to the Rights of Jurisdiction of United States in the Bering's Sea and the Preservation of Fur Seals* (1893) 28 RIAA, 263–276.

the scope of coastal States' rights over the neighboring high seas – and thus favoring the long-established principle of freedom of the high seas – the tribunal determined that the United States possessed no right to unilaterally regulate high seas fisheries.⁹⁶ Yet this arbitration is notable for the tribunal's incorporation of the general principle of good faith in finding a legal prohibition against exercising rights for the sole purpose of injuring another State. This doctrine of abuse of rights is closely linked to the principle of *sic utere tuo ut alienum non laedas* as reflected in Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration.⁹⁷

The *Lac Lanoux* and *Trail Smelter* Awards demonstrate the significance of agreement between tribunals as to the existence and character of a general principle. In the *Lac Lanoux* arbitration, the tribunal found that France had not breached its obligation to take into account Spain's interests in the course of negotiations, yet stated that 'the rule that states may utilize the hydraulic power of international watercourses cannot be established as a custom, even less as a general principle of law'.⁹⁸ When the case is viewed alongside *Trail Smelter*, it is evident that activities within one State should not damage the environment of other States.⁹⁹

While international courts and tribunals have been relatively hesitant to formally recognize 'general principles of international law',¹⁰⁰ they have long considered that their decisions must accord with certain general principles that exist beyond the parties' *compromis*,¹⁰¹ and the ICJ has referred to the 'rules and principles of international law' in affirming this power.¹⁰² It is notable in this regard that the ICJ as of 2015 had delivered 131 Judgments and Advisory

96 See Lowe, *International Law* (n 52) 236, 238.

97 See Sands and others, *Principles of International Environmental Law* (n 33) 213.

98 *Lac Lanoux Arbitration (France v, Spain)* (1957) 24 ILR 101, 130. See further Owen McIntyre, 'The Role of Customary Rules and Principles of International Environmental Law in the Protection of Shared International Freshwater Resources' (2006) 46 *Natural Resources Journal* 157.

99 See Sumudu A. Atapattu, *Emerging Principles of International Environmental Law* (Transnational 2006) 2.

100 See Nicolas de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules* (OUP 2002) 243. Recourse to analogies to municipal law may be particularly unhelpful in an environmental context. See Boyle and Birnie, *International Law and the Environment* (n 33) 27.

101 See *North American Dredging Co. of Texas Case* (1926), Mexican-United States General Claims Commission, 23. See further Cheng, *General Principles of Law as Applied by International Courts and Tribunals* (n 41) 129–130.

102 *Kasikili/Sedudu Island (Botswana v Namibia)* [1999] 1 CJ Rep 1045, 1103.

Opinions, only 10 of which contain no mention of the term 'principle'. Out of 96 PCIJ decisions, 56 referred to at least one 'principle'.¹⁰³

General principles of a cross-regime nature¹⁰⁴ may stymie compulsions toward fragmentation in international law.¹⁰⁵ For example, international investment tribunals otherwise reluctant to apply specific rules of international environmental law may nevertheless look to principles such as sustainable development, which are broader than any subject-specific legal regime.¹⁰⁶

General principles may aid not only the development of other sources of international law, but also the application of law in a particular case. This is due to the 'equitable function' of general principles.¹⁰⁷ Indeed, equity has at times been treated as equivalent to general principles of law.¹⁰⁸ The drafters of the 1928 Geneva General Act took a particularly broad view of equity, regarding it as equivalent to settlement *ex aequo et bono*.¹⁰⁹ Yet equity has been more coherently treated in practice as a legal construct based on considerations of fairness and reasonableness, such as applied in the *Rann of Kutch*

103 See Marija Đorđeska, 'The Evolution of General Principles of Law through the Jurisprudence of International Courts and Tribunals', George Washington University Law School Working Paper [on file with authors] 7.

104 See Georges Abi-Saab, 'Fragmentation or Unification: Some Concluding Remarks' (1999) 31 New York University Journal of International Law and Policy 926. On the "rush" of international initiatives for the trans-sectoral codification of environmental law 'principles' beginning in the 1980s, see further Peter H. Sand, 'The Evolution of International Environmental Law,' in Daniel Bodansky, Jutta Brunée, Ellen Hey (eds), *The Oxford Handbook of International Environmental Law* (OUP 2008), 38 ('Following the World Charter for Nature, which was initiated by the IUCN and adopted as a "soft" UN General Assembly Resolution (37/7) in 1982, and the Montreal Rules of International Law Applicable to Transfrontier Pollution, which were adopted in 1982 by the (non-governmental) International Law Association, the 1987 Brundtland Commission report recommended a set of legal principles on 'transboundary natural resources and environmental interferences'. The UN International Law Commission began to struggle with the topic of responsibility and liability for environmental harm, and, in 1991, the Institut de Droit International embarked on its own formulation of rules applicable to the environment and to environmental damages (finalized at Strasbourg in 1997)').

105 See Vaughan Lowe, 'The Limits of the Law' (2016) 379 Recueil des Cours 30 ('Often, the search for coherence will locate an unclear rule in a broader legal context where we can see that it fits with other rules to create a consistent and comprehensive body of law').

106 See, e.g. Mads Andenas and Ludovica Chiussi (n 1) 5.

107 See Robert Kolb, 'General Principles of Procedural Law', in Zimmermann and others, *The Statute of the International Court of Justice* (n 35) 872–873.

108 See, e.g. *Norwegian Shipowners' Claims (Norway v United States of America)* (1922) 11 ILR 189, 370.

109 General Act for the Pacific Settlement of International Disputes, 26 September 1928, 93 UNTS 343, Article 28.

arbitration.¹¹⁰ In *Fisheries Jurisdiction*, the ICJ applied equity to the conservation of fishery resources in order to achieve an 'equitable solution derived from the applicable law'.¹¹¹

The constitutional and adaptive qualities of general principles are evidenced in the ICJ's expansive interpretation of the principle of good faith to justify its finding in *Nuclear Tests* that France's unilateral declaration was legally binding and dispositive of the case at hand.¹¹² Similarly, even when UN General Assembly Resolutions are framed as general principles, they may serve as a mechanism for the progressive development of the law, and potentially as well for the crystallization of customary rules.¹¹³ The ICJ has notably considered as well International Law Commission (ILC) draft articles for this purpose in environmental cases such as *Gabčíkovo–Nagymaros*¹¹⁴ and *Pulp Mills*.¹¹⁵

Gabčíkovo–Nagymaros was the first ICJ case to comprehensively concern international environmental law, and the Court used this opportunity to clarify aspects of the principles of sustainable development and ecological necessity.¹¹⁶ However, the Court also showed a fairly conservative restraint in this case, insofar as many of its holdings rested upon the laws of treaties and State responsibility, rather than evolving principles of international environmental law.¹¹⁷ The Court's Judgment in *Gabčíkovo–Nagymaros* is notable in part for clarifying that the obligation to conduct an environmental impact assessment arises from the principle of prevention, although the Court procedurally links this obligation to the principle of equitable and reasonable utilization.¹¹⁸

110 See Robert Jennings and Arthur Watts (eds), *Oppenheim's International Law* Volume 1 Peace (Longman 1992) 44.

111 *Fisheries Jurisdiction Cases (UK v Norway)* [1974] ICJ Rep 3, 33.

112 Ibid 873.

113 See Brownlie's *Principles of Public International Law* (n 47) 42.

114 Judgment, 78, 80 (addressing the draft articles on State responsibility).

115 *Pulp Mills on the River Uruguay (Argentina v Uruguay)* [2010] ICJ Rep 14, 68, 82.

116 See Laurence Boisson de Chazournes and Makane M. Mbengue, 'Gabčíkovo–Nagymaros Project (Hungary/Slovakia) (1997)', in Eirik Bjorge and Cameron Miles (eds), *Landmark Cases in Public International Law* (Bloomsbury 2017), 452. On the obligation to take into account environmental considerations when assessing a state of necessity, see Jorge E. Viñuales, 'The Contribution of the International Court of Justice to the Development of International Environmental Law: A Contemporary Assessment' (2008) 32 *Fordham International Law Journal* 232, 253.

117 See Jan Klabbers, 'The Substance of Form: The Case Concerning the *Gabčíkovo–Nagymaros* Project, Environmental Law, and the Law of Treaties' (1997) 8 *Yearbook of International Environmental Law* 32, 34.

118 *Gabčíkovo–Nagymaros* (n 14) 56, 77–78. See also *Case Concerning Pulp Mills* (n 50) 75 ('[S]uch utilization could not be considered to be equitable and reasonable if the interests of the other riparian State in the shared recourse and the environmental protection

As treated in this case, the principle of prevention requires States to account for the impact of activities conducted within their territories, including in respect of the environment.¹¹⁹ The importance of this principle was emphasized in the 1991 Espoo Convention and Principle 17 of the Rio Declaration, the latter of which envisages risk evaluation through environmental impact assessments. In *Gabčíkovo–Nagymaros*, Hungary connected this principle to that of precaution.¹²⁰ As reflected in Principle 15 of the Rio Declaration, ‘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.’¹²¹ Both the principles of prevention and precaution are closely related to the requirement under customary international law to conduct environmental impact assessments.¹²² In this case, the Court was guided by the principle of prevention when stating that ‘in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage.’¹²³

of the latter were not taken into account’). See John H. Knox, ‘The Myth and Reality of Transboundary Environmental Impact Assessment’ (2002) 96 AJIL 291, 293.

119 See further Laurence Boisson de Chazournes and Sandrine Maljean-Dubois, ‘Principes du Droit International de l’Environnement’ (2011) *Jurisclasseur Environnement et Développement Durable* 60.

120 *Case concerning the Gabčíkovo–Nagymaros Project* (n 14) 62 (arguing that ‘[t]he previously existing obligation not to cause substantive damage to the territory of another State had [...] evolved into an *erga omnes* obligation of prevention of damage pursuant to the “precautionary principle”). See further Makane M. Mbengue, *Essai sur une théorie du risqué en droit international: L’anticipation du risqué environnemental et sanitaire* (Pedone 2009); Laurence Boisson de Chazournes, ‘Precaution in International Law: Reflection on its Composite Nature’, in Tafsir M. Ndiaye and Rüdiger Wolfrum (eds), *Law of the Sea, Environmental Law and Settlement of Disputes* (Brill Nijhoff 2007).

121 The principle is also found in the 1985 Vienna Convention for the Protection of the Ozone Layer and its 1987 Montreal Protocol (referring to precautionary measures), the Convention on Biodiversity and its Cartagena Protocol (Articles 9 and 10), the 1992 Convention on Climate Change, and the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes.

122 See further Malgosia Fitzmaurice, David M. Ong, Panos Merkouris (eds), *Research Handbook on International Law* (Edward Elgar 2010), 187 (‘[F]rom a legal point of view, the question is whether precaution could become a principle of customary law in international law, on one hand, and a general principle of environmental law at the national level on the other hand’).

123 *Gabčíkovo–Nagymaros* (n 14) 78; See Jutta Brunée, ‘Of Sense and Sensibility: Reflections on International Liability Regimes as Tools for Environmental Protection’ (2004) 53 ICLQ 351.

The Court took note of the appearance of normative developments which must be taken into account for the purpose of environmental protection (referring to the aforementioned obligations of 'vigilance and prevention'),¹²⁴ but did not base its decision in the case upon the express recognition of the precautionary principle's legal character. Judge Weeramantry, however, emphasized the need to take into account *erga omnes* obligations in international adjudication, and in so doing implied questions as to how an *erga omnes* conception of sustainable development might be legally actionable.¹²⁵

We have entered an era of international law in which international law subserves not only the interests of individual States, but looks beyond them and their parochial concerns to the greater interests of humanity and planetary welfare. In addressing such problems, which transcend the individual rights and obligations of the litigating States, international law will need to look beyond procedural rules fashioned for purely *inter partes* litigation. When we enter the arena of obligations which operate *erga omnes* rather than *inter partes*, rules based on individual fairness and procedural compliance may be inadequate. The great ecological questions now surfacing will call for thought upon this matter. International environmental law will need to proceed beyond weighing the rights and obligations of parties within a closed compartment of individual State self-interest, unrelated to the global concerns of humanity as a whole.¹²⁶

Judge Weeramantry's judicial opinions also staked out progressive legal views on related environmental principles, such as his *Nuclear Weapons* dissent that 'the rights of future generations have passed the stage when they were merely an embryonic right struggling for recognition. They have woven themselves into international law through major treaties, through juristic opinion and through general principles of law recognized by civilized nations'.¹²⁷

¹²⁴ *Gabčíkovo–Nagymaros* (n 14) 78.

¹²⁵ See generally Adriana Koe, 'Damming the Danube: The International Court of Justice and the *Gabčíkovo–Nagymaros* Project (*Hungary v Slovakia*)' (1998) 20 *Sydney Law Review* 612.

¹²⁶ *Gabčíkovo–Nagymaros Project*, Separate Opinion of Judge Weeramantry (n 14), 118–119. For a critical examination of Judge Weeramantry's approach that questions the legal force of the principle of sustainable development vis-à-vis State responsibility, see Sumudu A. Atapattu, *Emerging Principles of International Environmental Law* (Transnational 2006) 159–160.

¹²⁷ *Legality of the Threat or Use of Nuclear Weapons*, Dissenting Opinion of Judge Weeramantry, Advisory Opinion s [1966] ICJ Rep 455. For Judge Weeramantry's views on equity more generally, see Separate Opinion of Judge Weeramantry, *Maritime Delimitation in the Area Between Greenland and Jan Mayen (Denmark v Norway)* [1993] ICJ Rep 38.

This dictum elaborates upon the Court's recognition in the same Advisory Opinion of the interests of 'generations unborn'.¹²⁸ Nevertheless, the Court's statement in this decision that States are obligated 'to ensure that activities within their jurisdiction and control respect the environment of other states' may be seen to dilute to some extent – in its usage of the term 'respect' – the more rigid formulation of this obligation as codified in Principle 21 of the Stockholm Declaration.¹²⁹

This principle of intergenerational equity solidifies notions of distributive justice within international environmental law,¹³⁰ and found early expression in Principles 2 and 5 of the 1972 Stockholm Declaration. As noted by the Brundtland Commission, intergenerational equity is a component principle of sustainable development,¹³¹ which may be defined as development meeting present needs without compromising future generations' ability to meet theirs.¹³² The Court in *Gabčíkovo–Nagymaros* appears to have left space for a more explicit recognition of this point in the future, insofar as it emphasized sustainable development as encompassing the 'need to reconcile economic development with protection of the environment'.¹³³ The Court's treatment of sustainable development in this manner has demonstrated the principle's utility in reconciling distinct interests and creating links between different regulatory areas,¹³⁴ as well as the Court's own inclination to interpret treaties in light of evolving environmental principles. As it observed regarding the parties'

128 *Legality of the Threat or Use of Nuclear Weapons* (127) 226, 24.

129 See Edith Brown Weiss, 'Opening the Door to the Environment and to Future Generations', in Laurence Boisson de Chazournes and Philippe Sands (eds), *International Law, The International Court of Justice and Nuclear Weapons* (CUP 1999), 338, 340.

130 See generally Dinah Shelton, 'Intergenerational Equity', in Rüdiger Wolfrum and Chie Kojima (eds), *Solidarity: A Structural Principle of International Law* (Springer 2010).

131 *The World Commission on Environment and Development, Our Common Future* (OUP 1987) 43 ('Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs'). This was further defined by the 2002 UN Johannesburg Declaration as 'economic development, social development and environmental protection'. See Alice Adami, Brian McGarry, Pamela Ugaz, (2011) 'A Comparative Analysis of Generalised Systems of Preferences: Challenges, Constraints and Opportunities for Improvement', Graduate Institute of International and Development Studies 52.

132 See Principles 3 and 4 of the Rio Declaration on Environment and Development. See further Vaughan Lowe, 'Sustainable Development and Unsustainable Arguments', in Alan Boyle and David Freestone (eds), *International Law and Sustainable Development: Past Achievements and Future Challenges* (OUP 1999).

133 *The Gabčíkovo–Nagymaros Project* (n 14), 78. See generally Philippe Sands *et al* (n 33) and Stuart Bell and Donald McGillivray, *Environmental Law* (7th edn, OUP 2008).

134 See Philippe Sands, 'International Courts and the Application of the Concept of "Sustainable Development"' (1999) 3 *Max Planck Yearbook of United Nations Law* 363.

bilateral treaty, '[t]he awareness of the vulnerability of the environment and the recognition that environmental risks have to be assessed on a continuous basis have become much stronger in the years since the treaty's conclusion'.¹³⁵

A similar inclination was demonstrated by the tribunal in the *Iron Rhine Arbitration*, which cited both the ICJ's *Gabčíkovo–Nagymaros* Judgment and Article 31(3)(c) of the 1969 Vienna Convention on the Law of Treaties as support for the proposition that 'an evolutive interpretation, which would ensure any application of the treaty that would be effective in terms of its object and purpose, will be preferred to a strict application of the intertemporal rule'.¹³⁶ The same reasoning would be adopted by the Court of Arbitration in the *Indus Waters Kishenganga Arbitration*:

It is established that principles of international environmental law must be taken into account even when (unlike the present case) interpreting treaties concluded before the development of that body of law. The *Iron Rhine* Tribunal applied concepts of customary international environmental law to treaties dating back to the mid-nineteenth century, when principles of environmental protection were rarely if ever considered in international agreements and did not form any part of customary international law. Similarly, the International Court of Justice in *Gabčíkovo–Nagymaros* ruled that, whenever necessary for the application of a treaty, "new norms have to be taken into consideration, and [...] new standards given proper weight". It is therefore incumbent upon this Court to interpret and apply this 1960 Treaty in light of the customary international principles for the protection of the environment in force today.¹³⁷

The approach of these courts and tribunals is consistent with the gap-filling function of general principles, as a treaty cannot through silence preclude the potential application of subsequently emergent principles.¹³⁸ The ICJ has at

¹³⁵ *Case Concerning the Gabčíkovo–Nagymaros Project* (n 14) 68. See further *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v France) Case* [1995] ICJ Rep 288, Dissenting Opinion of Judge Weeramantry, 341. See also Dissenting Opinion of Judge Ad Hoc Palmer, 408 (citing *Certain Phosphate Lands in Nauru* as a sign of the ICJ's willingness to contribute to the development of principles of international environmental law).

¹³⁶ *Arbitration Regarding the Iron Rhine Railway* (n 5), 80. See also 66–67 (citing *Gabčíkovo–Nagymaros* for the premise that environment and development are 'mutually reinforcing, integral concepts').

¹³⁷ *Indus Waters Kishenganga Arbitration (Pakistan v India)* (2013) Partial Award, Permanent Court of Arbitration 171 <https://www.pcacases.com/web/view/20> last visited 9 April 2018

¹³⁸ See further Alan Boyle, 'Gabčíkovo–Nagymaros Case: New Law in Old Bottles' (1998) 8 *Yearbook of International Environmental Law* 13, 15.

times in the years since its *Gabčíkovo–Nagymaros* Judgment elaborated upon the need to seek compatibility between treaty rules and evolving environmental principles, such as in *Pulp Mills*:

[The 1975 Statute of the River Uruguay] distinguishes between applicable international agreements and the guidelines and recommendations of international technical bodies. While the former are legally binding and therefore the domestic rules and regulations enacted and the measures adopted by the State have to comply with them, the latter, not being formally binding, are, to the extent they are relevant, to be taken into account by the State so that the domestic rules and regulations and the measures it adopts are compatible ('con adecuación') with those guidelines and recommendations.¹³⁹

In *Pulp Mills*, Argentina invoked, *inter alia*, 'the principles of equitable, reasonable and non-injurious use of international watercourses, the principles of sustainable development, prevention, precaution and the need to carry out an environmental impact assessment'.¹⁴⁰ The Court's Judgment in the case is notable for supporting the universality of the precautionary principle by inferring it into an instrument which predated the principle's emergence.¹⁴¹ By contrast, the WTO Appellate Body has derived the principle of sustainable development from its express reference within the Preamble of GATT 1994, for the purpose of interpreting Article XX(g)'s rule concerning ecological necessity.¹⁴²

The WTO Dispute Settlement Body has at times been asked to address the contours of the precautionary principle. In *India – Quantitative Restrictions*,¹⁴³ India claimed the right to use precautionary measures not only out of general prudence, but also in the context of uncertainty with which the Appellate Body had grappled in *Hormones*. In the present case, the Appellate Body implicitly rejected the precautionary principle as a justification for protectionist measures in the face of a mere general possibility of a deterioration of the balance of payments. In this sense, the case suggests a preventative approach,

¹³⁹ *Pulp Mills* (n 14) 14, 45.

¹⁴⁰ *Ibid* 42.

¹⁴¹ See Owen McIntyre 'The Proceduralisation and Growing Maturity of International Water Law' (n 90) 493.

¹⁴² See, WTO, (12 October 1998) *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, AB-1998–4, Report of the Appellate Body, 48.

¹⁴³ (WTO), (23 August 1999) *India – Quantitative Restrictions on Imports of Agricultural, Textile and Industrial Products*, AB-1999–3.

rather than a precautionary one.¹⁴⁴ Also notable in this context is *Asbestos*, in which Canada did not reject the possibility of using precaution in the WTO framework, but rather contended that this principle did not justify an import ban announced by France.¹⁴⁵ Neither the Panel nor the Appellate Body took a position on France's conception of the precautionary principle. Nevertheless, the DSB's case law seems to implicitly provide space for the precautionary principle by declaring that the acquisition of scientific certainty on all aspects of an issue is not required to justify the excepted objectives set forth in Article XX of the GATT (in particular, the protection of human, animal or plant life and health, and the conservation of exhaustible natural resources).¹⁴⁶

Looking beyond the GATT, the DSB has had occasion to analyze precautionary measures in the context of other WTO covered agreements, such as the TBT Agreement¹⁴⁷ and, in particular, the SPS Agreement. The Appellate Body in the *Hormones* case followed the work of the ICJ in *Gabčíkovo–Nagymaros*, and as such did not take a stance on the customary status of the precautionary principle. In particular, the Appellate Body observed that 'the Court did not identify the precautionary principle as one of those recently developed norms. It also declined to declare that such principle could override the obligations of the Treaty between Czechoslovakia and Hungary of 16 September 1977 [...]'.¹⁴⁸ Notably, while the Appellate Body indicated that the precautionary principle had not yet become clearly identifiable as 'a part of general customary law', it might nevertheless have 'crystallized into a general principle of customary environmental law'.¹⁴⁹

The Panel in this case had found that only once the precautionary principle achieved customary status could it be utilized in the interpretation of Articles 5.1 and 5.2 of the Agreement, and even then only to the extent that it would

144 See Makane M. Mbengue and Urs P. Thomas, 'The Precautionary Principle: Torn between Biodiversity, Environment-related Food safety and the WTO' (2005) 5 *International Journal of Global Environmental Issues* 39, 40.

145 WTO (11 April 2001) *EC – Measures Affecting Asbestos and Asbestos-Containing Products*, AB-2000-11.

146 Ibid 40; *ibid*, Report of the Panel, WT/DS135/R (18 September 2000), 446.

147 See, e.g. WTO, (26 September 2002) *EC – Trade Description of Sardines*, AB-2002-3.

148 *EC – Measures Concerning Meat and Meat Products (Hormones)* (16 January 1998) Report of the Appellate Body, WT/DS48/AB/R, 16 January 1998, 48.

149 ILC, 'Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law. Report of the Study Group of the International Law Commission'. UN Doc. A/CN.4/L.682 (2006) 34, 73. See further Chenaz B. Seelarbokus, 'International Environmental Law', *International Studies, Oxford Research Encyclopedias* (March 2010) (section on 'International Environmental Jurisprudence').

not do violence to the express content of those Articles.¹⁵⁰ Notably, the Appellate Body would recognize that the precautionary principle “finds reflection” in Article 5.7 of the SPS Agreement.¹⁵¹ The Appellate Body also observed that in some circumstances qualitative, rather than traditional quantitative, methods must be utilized in assessing risk and scientific evidence under the SPS Agreement.¹⁵² Moreover, it found that a WTO member may take into account the arguments of the scientific minority during risk assessment under Article 5.1 of the Agreement.¹⁵³

The Appellate Body would continue its elaboration of the precautionary principle vis-à-vis the SPS Agreement in several subsequent cases. As in *Hormones*, the sanitary measure in question in *Australia – Salmon* had been declared incompatible with WTO law primarily due to the lack of an objective risk assessment. Drawing a wide dichotomy between precaution and prevention, the Appellate Body found that a protective measure justified by Article 5.1 of the Agreement follows from a risk assessment evaluating the “likelihood” of health risks (‘[I]t is not sufficient that a risk assessment conclude that there is a *possibility* of entry, establishment or spread of diseases and associated biological and economic consequences’).¹⁵⁴ In *Japan – Agricultural Varietals*, the Appellate Body’s interpretation of Article 5.7 of the Agreement appeared to take the WTO further from a precautionary approach, finding that this Article ‘should be considered in the interpretation of the obligation not to maintain an SPS measure without sufficient scientific evidence. [...] An overly broad and flexible interpretation of that obligation would render Article 5.7 meaningless’.¹⁵⁵ In *Japan – Apples*, the Panel parsed this constraint into four cumulative conditions for the application of precautionary measures under Article 5.7,¹⁵⁶

150 WTO, *EC – Measures Concerning Meat and Meat Products (Hormones)* (18 August 1997) Complaint by Canada WT/DS48/R/CAN, 230, 251. *EC Measures Concerning Meat and Meat Products (Hormones)* (18 August 1997) Complaint by the United States, WT/DS26/R/USA, 201–202, 221.

151 WTO, *EC – Measures Concerning Meat and Meat Products (Hormones)*, (16 January 1998) WT/DS26/AB/R, WT/DS48/AB/R, 48.

152 Ibid 74 (‘[W]e note that imposition of such a quantitative requirement finds no basis in the SPS Agreement’).

153 Ibid 78 (linking precaution and prevention insofar as ‘the very existence of divergent views presented by qualified scientists who have investigated the particular issue at hand may indicate a state of scientific uncertainty’).

154 WTO, *Australia – Measures Affecting Importation of Salmon*, (20 October 1998) Report of the Appellate Body, doc. WT/DS18/AB/R 37.

155 WTO, *Japan – Measures Affecting Agricultural Products*, (22 February 1999) Report of the Appellate Body WT/DS76/AB/R, 21.

156 WTO, *Japan – Measures Affecting the Importation of Apples*, Report of the Panel, 15 July 2003, WT/DS245/R, 182 (insufficient scientific evidence, the adoption of the measure on

while the Appellate Body would emphasize in particular the condition of insufficient – rather than ‘uncertain’ – scientific evidence.¹⁵⁷

The precautionary principle has also played a significant and constructive dispute settlement role in the law of the sea since the earliest cases under UNCLOS. In particular, the ITLOS Order on Provisional Measures in *Southern Bluefin Tuna* may be seen to have staked a progressive stance in the development of the precautionary principle. In light of scientific uncertainty concerning the appropriate fisheries conservation measures to be taken, the Tribunal ruled that the parties should ‘act with prudence and caution to ensure that effective conservation measures are taken to prevent serious harm to the stock of southern bluefin tuna.’¹⁵⁸ In a unanimous advisory opinion, the Seabed Disputes Chamber of ITLOS incorporated the precautionary principle (by reference to Article 31(3)(c) of the Vienna Convention on the Law of Treaties) into UNCLOS regulations concerning exploitation of the international seabed, citing Principle 15 of the Rio Declaration and the ICJ’s *Pulp Mills* Judgment.¹⁵⁹

A more recent UNCLOS case, the *South China Sea* arbitration, dealt in significant part with allegations of environmental degradation, including the Philippines’ assertion that China had harmed the marine environment through its construction activities and fishing practices. Stressing that it was ‘particularly troubled’ by such concerns, the arbitral tribunal applied the principle of due

the basis of available pertinent information, the importing member’s attempt to obtain additional information required for a more objective risk assessment, and the member’s resulting review of the measure within a reasonable period of time).

157 Ibid, Report of the Appellate Body (26 November 2003) WT/DS245/AB/R 67. See also WTO, *EC – Measures Concerning Meat and Meat Products* (16 January 1990) Report of the Appellate Body WT/DS26/AB/R, WT/DS48/AB/R, 71 ([‘T]he requirements of a risk assessment under Article 5.1 [of the SPS Agreement], as well as of “sufficient scientific evidence” under Article 2.2 [of the SPS Agreement], are essential for the maintenance of the delicate and carefully negotiated balance in the SPS Agreement between the shared, but sometimes competing, interests of promoting international trade and of protecting the life and health of human beings’). See generally Makane Mbengue & Urs P. Thomas, ‘The Precautionary Principle’s Evolution in Light of the Four SPS Disputes’, *Journal of Trade and Economic Studies*, Issue 2004-3 (2004).

158 *Southern Bluefin Tuna*, (*New Zealand v. Japan*; *Australia v. Japan*), (Provisional Measures, Order of 16 August 1999), ITLOS Reports 1999, 274, 296. See further Nicolas de Sadeleer, ‘The Effect of Uncertainty on the Threshold Levels to Which the Precautionary Principle Appears to be Subject’, in Maurice Sheridan and Luc Lavrysen (eds), *Environmental Law Principles in Practice* (Bruylant 2002), 23.

159 See *Activities in the Area*, 41 (n 28). Also notable in this regard is the ICJ’s Judgment in *Whaling in the Antarctic*, which addressed arguments concerning obligations of ‘sustainable exploitation’ under the Whaling Convention. *Whaling in the Antarctic* (*Australia v. Japan: New Zealand intervening*) [2014] ICJ Rep 226.

diligence in especially strict terms.¹⁶⁰ The tribunal interpreted the rules found in Part XII of UNCLOS in light of the ‘general corpus of international law’ relating to the environment, imputing to Article 192 ‘a due diligence obligation to prevent the harvesting of species that are recognised internationally as being at risk of extinction and requiring international protection’.¹⁶¹

4 Specialization and Cross-Fertilization of Environmental Principles

From the foregoing, we may conclude that over the last two decades international courts and tribunals have brought some Esperanto to Babel, infusing general principles with a greater degree of coherence. Upon closer examination, the application of general principles of international environmental law reveals both norms that originate within this regime and those which are imported and adapted from elsewhere.

An example of the former is the general principle of resilience, which concerns an ecosystem’s ability to resist damage and recover efficiently. This principle reflects a shift towards ecological sustainability, and in this sense is related to the principle of sustainable development.¹⁶² International instruments recognizing this shift include the Millennium Ecosystem Assessment¹⁶³ and the UN Environment Programme’s Global Resilience Project.¹⁶⁴ Given the outsized threat of climate change toward ecological resilience, it is particularly notable that the 2015 Paris Agreement states its aim to ‘strengthen the global

¹⁶⁰ *South China Sea Arbitration (The Republic of Philippines v The People’s Republic of China.)* (2016) 381. <https://www.pcacases.com/web/view/7> last accessed 9 April 2018.

See further Makane M. Mbengue, ‘The South China Sea Arbitration: Innovations in Marine Environmental Fact-Finding and Due Diligence Obligations’ (2016) American Society of International Law ‘Unbound Symposiums on South China Arbitration The South China Sea Arbitration: Innovations in Marine Environmental Fact-Finding and Due Diligence Obligations’, *AJIL* 285, 285–287 <https://www.asil.org/blogs/symposium-south-china-sea-arbitration-south-china-sea-arbitration-innovations-marine> last accessed 9 April 2018.

¹⁶¹ *Ibid.*, 380–381. However, this treatment of the principle of due diligence may be contrasted with the Final Award’s omission of the precautionary principle.

¹⁶² See Andrea Ross ‘Modern Interpretations of Sustainable Development’ (2009) 36 *Journal of International Society* 32; cf. Brian McGarry, ‘Third Parties and Insular Features after the South China Sea Arbitration’ (2018) 35 Chinese (Taiwan) Yearbook of International Law and Affairs 101, noting that UNCLOS recognizes in its Preamble the gap-filling role to be played by ‘rules and principles of general international law’.

¹⁶³ See further Joseph Alcamo and Elena M. Bennett, *Ecosystems and Human Well-being: A Framework for Assessment* (Island Press 2003).

¹⁶⁴ See further Principles for Sustainable Insurance Initiative, ‘Building disaster-resilient communities and economies’, UNEP Finance Initiative, June 2014.

response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by [...m]aking financial flows consistent with a pathway towards low greenhouse gas emissions and climate resilient development'.¹⁶⁵ Additionally, the effectiveness of emergent instruments such as the prospective treaty on marine biodiversity beyond national jurisdiction will depend upon their capacity to achieve a resilient ocean ecosystem through marine spatial planning practices integrating, *inter alia*, the precautionary principle.¹⁶⁶

The general principle of mutual supportiveness, on the other hand, is not original to international environmental law. The principle bears some kinship to the treatment of general principles as filling lacunae in some early arbitral case law, such as the Franco-Mexican Commission's dictum in *Georges Pinson* that '[t]oute convention internationale doit être réputée s'en référer tacitement au droit international commun, pour toutes les questions qu'elle ne résout pas elle-même en termes exprès et d'une façon différente'.¹⁶⁷ This gap-filling function should not be confused with the treatment of 'subsidiary means for the determination of rules of law' as reflected in Article 38(1)(d) of the ICJ Statute.¹⁶⁸ Rather, it accords with the premise that relevant treaties will supervene general principles as *lex specialis* among the sources of international law, and any lacunae therein may be supplemented with general principles in order to avoid a finding of *non liquet*.¹⁶⁹ Mutual supportiveness in contemporary

165 Paris Agreement, Article 2.

166 See Report of the Preparatory Committee established by UNGA Res 69/292 (31 July 2017) UN Doc A/AC.287/2017/PC.4/2/J. See also 'Transforming Our World: Sustainable Development Goals. The 2030 Agenda for Sustainable Development', Goal 14 ('Conserve and sustainably use the oceans, seas and marine resources for sustainable development'). <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> last accessed 9 April 2018.

See further High-Level Political Forum on Sustainable Development (2017) 14 'HLPF Thematic Review of SDG'; Brian McGarry, (2017) 'Managing Marine Biodiversity in the Gulf of Guinea: What Role for General Principles of Law?', 9th Conference of the Advisory Board on the Law of the Sea (Monaco) [on file with authors].

167 *Georges Pinson* case, Franco-Mexican Commission, Annual Digest of Public International Law Cases (1920–1928) 422 ('[e]very international convention must be deemed tacitly to refer to general principles of international law for all questions which it does not itself resolve in express terms and in a different way').

168 See Alain Pellet, 'Article 38', *The Statute of the International Court of Justice: A Commentary* 850 (n 54), observing that general principles of law 'are direct sources of rights and obligations according to which the Court must decide while, on the contrary, both jurisprudence and doctrine are subsidiary means which must be used to determine, e.g., the general principles themselves'.

169 As to the application of *non liquet* in the Court's advisory practice, see *Nuclear Weapons*, Advisory Opinion (1997) (n 32). See generally Abdul G. Hamid, *Sources of International*

international law, however, progresses beyond this gap-filling paradigm and instead treats the sources of international law as equally weighted, requiring harmonization if possible in a given instance.¹⁷⁰ As the ILC has stated,

[A]lthough the two norms seemed to point in diverging directions, after some adjustment, it is still possible to apply or understand them in such way that no overlap or conflict will remain. This may [...] take place through an attempt to reach a resolution that integrates the conflicting obligations in some optimal way in the general context of international law.¹⁷¹

This conception of mutual supportiveness as a quest for normative compatibility has found particular application in international investment arbitrations relating to environmental protection.¹⁷² In *S.D. Myers*, an arbitral tribunal compared NAFTA and the North American Agreement on Environmental Cooperation to derive general principles applicable to the interpretation of each treaty, observing in particular that ‘environmental protection and

Law: A Re-Evaluation (2003) 11 International Islamic University Malaysia Law Journal 17; Shaw, *International Law* (n 26) 52.

170 See generally Laurence Boisson de Chazournes and Makane M. Mbengue, ‘A “Footnote as a Principle”. Mutual Supportiveness in an Era of Fragmentation’, in Holger P. Hestermeyer and others (eds), *Coexistence, Cooperation and Solidarity – Liber Amicorum Rüdiger Wolfrum*, vol. 11 (Martinus Nijhoff 2011) 1615–1638; Riccardo Pavoni, ‘Mutual Supportiveness as a Principle of Interpretation and Law-Making: A Watershed for the ‘WTO-and-Competing-Regimes’ Debate?’ (2010) 21 *EJIL* 649. See also Laurence Boisson de Chazournes and Brian McGarry, ‘What Roles Can Constitutional Law Play in Investment Arbitration?’ (2014) 15 *Journal of World Investment and Trade* 862, 886–887.

171 ILC, Report of the Study Group of the International Law Commission finalized by M. Koskeniemi, ‘Fragmentation of International Law: Difficulties arising from the Diversification and Expansion of International Law’ (2006) UN Doc A/CN.4/L.682, 28. See further ILC, (2016) ‘Identification of customary international law: The role of decisions of national courts in the case law of international courts and tribunals of a universal character for the purpose of the determination of customary international law’, Memorandum by the Secretariat UN Doc A/CN.4/691 3–4 (‘A domestic judicial decision might also be relevant for the purpose of the identification of general principles of law’), citing *Oil Platforms (Islamic Republic of Iran v United States of America)* [2003] ICJ Rep 161, 354–358, Separate Opinion of Judge Simma.

172 As concerns international water law, see generally Brian McGarry, ‘The UN Watercourses Convention and International Economic Law’, in Laurence Boisson de Chazournes, Makane M. Mbengue, Komlan Sangbana, Mara Tignino (eds), *The United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses: A Commentary* (OUP 2018).

economic development can and should be mutually supportive'.¹⁷³ The tribunal prioritized trade concerns over environmental concerns to the extent that the two could not be reconciled, stating that a 'logical corollary' of the general principle of mutual supportiveness 'is that where a state can achieve its chosen level of environmental protection through a variety of equally effective and reasonable means, it is obliged to adopt the alternative that is most consistent with open trade'.¹⁷⁴

A view of mutually supportive norms may reduce the apparition of conflicts of law in investment disputes,¹⁷⁵ as recognized by collectives of developed States such as the OECD:

The international investment policy community has a strong interest in effective policy frameworks that clarify environmental responsibilities and sharpen incentives for governments and businesses to live up to these responsibilities. Effective international environmental law and standards allow the international investment policy community to pursue with greater confidence its agenda of investment liberalization, promotion and protection, in support of sustainable development.¹⁷⁶

173 In a NAFTA Arbitration under the UNCITRAL Arbitration Rules, *S.D. Myers, Inc. (Claimant) and Government of Canada (Respondent)*, Partial Award, 13 November 2000, 50–51, 61.

174 Ibid 51.

175 To the extent that conflict between investment law norms and those embodied in an environmental treaty might be considered unavoidable in a particular instance, conflict of law rules may find application. See *Vattenfall AB, Vattenfall Europe AG, Vattenfall Europe Generation AG & Co. KG (Sweden) v Federal Republic of Germany*, ICSID Case No. ARB/09/6. See further Jorge Viñuales, *Foreign Investment and the Environment in International Law*, pp. 174–175 (also referencing *Plama Consortium Ltd v Republic of Bulgaria*, ICSID Case No. ARB/03/24, Award (27 August 2008), 67).

176 Organisation for Economic Cooperation and Development, Investment Division, Directorate for Financial and Enterprise Affairs (2011), 'Harnessing Freedom of Investment for Green Growth', Freedom of Investment Roundtable, 3 (in which the drafters find that 'their governments' environmental and investment policy goals are compatible', concluding 'that these goals can be made mutually reinforcing and that this mutual supportiveness should be fostered'). <http://www.oecd.org/investment/investment-policy/harnessingfreedomofinvestmentforgreengrowth.htm> last accessed 9 April 2018.

See further OECD Guidelines for Multinational Enterprises, Part I, Section 5, Chapeau (instructing enterprises to contribute to the sustainable development goals of international agreements); Clause 8 (expressly referencing the utility of partnerships ('[In particular, enterprises should] contribute to the development of environmentally meaningful and economically efficient public policy, for example, by means of partnerships or initiatives that will enhance environmental awareness and protection')). <http://www.oecd.org/corporate/mne/> last accessed 9 April 2018.

This principle finds application in multilateral investment treaties such as the Dominican Republic-Central America Free Trade Agreement (CAFTA-DR)¹⁷⁷ and the Cartagena Agreement of the Andean Community,¹⁷⁸ and arises reciprocally in environmental conventions that encourage international investment.¹⁷⁹ Reflections of the *S.D. Myers* tribunal's dictum linking environmental protection and economic development may be seen in instruments which underline the role of corporate investors and other private actors as partners in international sustainable development goals, such as the UN Global Compact,¹⁸⁰ Section III of Agenda 21,¹⁸¹ the public participatory

177 See Preamble, CAFTA-DR (adopted 5 August 2004) (instructing the Contracting Parties to 'IMPLEMENT this Agreement in a manner consistent with environmental protection and conservation, promote sustainable development, and strengthen their cooperation on environmental matters'); Article 17.1, CAFTA-DR. A facilitative agreement integrated within CAFTA-DR also reflects this principle. See Environmental Cooperation Agreement, Preamble ('ACKNOWLEDGING that economic development, social development and environmental protection are interdependent and mutually reinforcing components of sustainable development [...]'). http://www.sice.oas.org/Trade/CAFTA/CAFTADR_e/CAFTADRin_e.asp last accessed 9 April 2018.

178 See Article 146, Andean Subregional Integration Agreement (adopted 26 May 1969) (1969) 8 ILM 910 ('Member Countries shall undertake joint policies that enable a better use of their renewable and nonrenewable natural resources and the preservation and improvement of the environment').

179 See, e.g. Preamble, Convention on Biological Diversity, 6 May 1992, 1760 UNTS 79 ('Acknowledging that substantial investments are required to conserve biological diversity and that there is the expectation of a broad range of environmental, economic and social benefits from those investments [...]'). See also Kyoto Protocol, Article 6 (establishing free transfer of emission credits so as to encourage investment in carbon reduction projects); Art. 12(2) ('The purpose of the clean development mechanism shall be to assist Parties [...] in achieving sustainable development and in contributing to the ultimate objective of the Convention, and to assist Parties [...] in achieving compliance with their quantified emission limitation and reduction commitments [...]').

180 See Principle 7, UN Global Compact (New York, 26 July 2000) ('Businesses should support a precautionary approach to environmental challenges'); Principle 8 ('[Businesses should] undertake initiatives to promote greater environmental responsibility'); Principle 9 ('[Businesses should] encourage the development and diffusion of environmentally friendly technologies'). <https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct> last accessed 9 April 2018.

181 See Chapter 23.2, Agenda 21 (Rio de Janeiro, 14 June 1992) ('One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making. Furthermore, in the more specific context of environment and development, the need for new forms of participation has emerged. This includes the need of individuals, groups and organizations to participate [...]'). <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf> last accessed April 2018.

and cooperative provisions of the 1992 Rio Declaration,¹⁸² and the 2015 Paris Agreement.¹⁸³

While the flexibility of soft law instruments and framework agreements has supported the progressive development of general principles in international environmental law, the multiplication of international courts and tribunals likely ensures that judges will continue to play a substantial role in defining these norms. This would seem to be entirely coherent with the origin of 'principles of law' as a source of law identified by jurists for application in the context of adjudication or arbitration. While Judge Hudson observed that 'international law is not created by an accumulation of opinions and systems; neither is its source a sum total of judgments, even if they agree with each other',¹⁸⁴ recent case law confirms that the normative character of general principles of law invariably requires refinement through judicial dialogue and authoritative application.¹⁸⁵ Indeed, it is because of judicial refinement that some States

182 See Principle 27, Rio Declaration on Environment and Development (Rio de Janeiro, 14 June 1992) ('States and people shall cooperate in good faith and in a spirit of partnership in the fulfillment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development').

183 See Article 6(8)(b), Paris Agreement (Paris, 12 December 2015) ('Parties recognize the importance of integrated, holistic and balanced non-market approaches being available to Parties to assist in the implementation of their nationally determined contributions, in the context of sustainable development and poverty eradication, in a coordinated and effective manner', with the aim to '[e]nhance public and private sector participation in the implementation of nationally determined contributions'); Article 6(4)(b), Paris Agreement (establishing '[a] mechanism to [...] support sustainable development', with the aim to 'incentivize and facilitate participation in the migration of greenhouse gas emissions by public and private entities authorized by a Party'). See also in this context the inclusion of private actors in the interactivity and participation goals of the UN Environment Programme's Climate Neutral Network https://cop23.unfccc.int/files/meetings/cop_15/climate_change_kiosk/application/pdf/09_12_17_unep_fanina1.pdf last accessed 9 April 2018.

184 Manley O. Hudson, *The Permanent Court of International Justice, 1920–1942* (Macmillan 1943) 336, 613 (discussing the *Lotus* case). Cf. George Schwarzenberger, *International Law* (Stevens & Sons 1957) 26–27 (discussing the 'law-creating process' inherent to treaties, custom, and general principles of law).

185 Compare, e.g., *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v Nicaragua)*, Compensation Owed by the Republic of Nicaragua to the Republic of Costa Rica, Judgment of 2 February 2018 (wherein the ICJ applied a fact-specific and arguably conservative approach to compensation for environmental damages); Advisory Opinion OC-23/17 of 15 November 2017 Requested by the Republic of Colombia (wherein the Inter-American Court of Human Rights embraced a broad vision of obligations to safeguard human rights through marine environmental protection). On these cases, see further Diane Desierto, 'Environmental Damages, Environmental Reparations, and the Right to a Healthy Environment: The ICJ Compensation Judgment in *Costa Rica v. Nicaragua*

now consider that it is time to negotiate a “Global Pact for the Environment” that would transform general principles of international environmental law into hard treaty law.¹⁸⁶ The role of international courts and tribunals in the formation, consolidation, and crystallization of the principles of international environmental law has undoubtedly contributed to this potential movement towards the “conventionalization” of such principles.

and the IACtHR Advisory Opinion on Marine Protection for the Greater Caribbean’, EJIL: Talk!, 14 February 2018 (‘These recent developments suggest that, while it is recognized that all States share responsibilities towards environmental protection especially under the precautionary principle, the precise allocation of environmental reparations owed through compensation will not always lie strictly on the side of the State that is the environmental tortfeasor, at least where the ICJ is concerned’).

- 186 See Preliminary Draft Global Pact for the Environment, <http://pactenvironment.emediaweb.fr/wp-content/uploads/2017/07/Global-Pact-for-the-Environment-project-24-June-2017.pdf>. Last accessed 9 April 2017. See further ‘Toward a Global Pact for the Environment’ [white paper], September 2017, <http://pactenvironment.emediaweb.fr/wp-content/uploads/2017/07/White-paper-Global-Pact-for-the-environment.pdf>. Last accessed 9 April 2017.