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THE HYDROGEN BOMB EXPERIMENTS AND INTERNATIONAL LAW

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THE hydrogen bomb shot of March 1, 1954—much more so than its predecessor of November 1952—was a shot heard 'round the world. Not unlike certain of the physical results of this thermonuclear experiment, the political "cloud" and the legal "fallout" which the explosion produced were not anticipated fully.

Serious injury of a number of Japanese fishermen, coupled with contamination of considerable quantities of fish, caused by the fallout of radioactive ash over a large area in the Pacific Ocean, had an enormous impact on public opinion throughout the world. At the same time, these events have given rise to a sudden concern over some of the legal problems surrounding the thermonuclear weapon.[1] Thus, the weapon itself has been denounced as "barbarous" and "inhuman," as being in disregard of the historic distinction between combatants and noncombatants, and as a contravention of the Geneva Convention of 1925.[2] Even the conducting of experiments with such weapons has been vigorously attacked by statesmen and by scientists.[3]

Other legal issues were raised in the United Nations. The inhabitants of the Marshall Islands petitioned the U.N. Trusteeship Council for an end to

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1. It is rather surprising how little attention this aspect of the hydrogen bomb experiments has received in the United States.

2. See speech by W. Harvey Moore, General Secretary of the International Law Association, before the 1954 Conference of the Association in Edinburgh, N.Y. Times, Aug. 10, 1954, p. 9, col. 2.

3. For example, see Jawaharlal Nehru's speech before the House of the People (lower chamber of the Indian Parliament), N.Y. Times, April 3, 1954, p. 1, col. 1; the speech of India's V.K. Krishna Menon before the U.N. Trusteeship Council, N.Y. Times, July 10, 1954, p. 1, col. 7; and speech of James Barrington, Burma's representative in the U.N. General Assembly, N.Y. Times, Oct. 2, 1954, p. 4, col. 7. More than 100 members of the British Labor Party signed a motion demanding that the tests be stopped. The Times (London), March 31, 1954, p. 8, col. 2. Dr. Hideki Yukawa, Japanese nuclear physicist and Nobel Prize winner, characterized the experiments as "atomic energy versus mankind." N.Y. Times, April 16, 1954, p. 7, col. 3. See also Albert Schweitzer's letter to the London Daily Herald, reprinted in 10 BULL. ATOM. SCIENTISTS 339 (1954); letter from Alexander Haddow, Director of the Chester Beatty [Cancer] Research Institute, to the The Times (London), March 30, 1954, p. 7, col. 5; and letter from Dr. Mortimer Camiel, N.Y. Times, April 16, 1954, p. 20, col. 6.

the tests or, failing that, for guarantees of strict safety measures.[4] In response to this petition, the Indian and Soviet representatives on the Council introduced resolutions [5] calling for immediate cessation of the experiments, on the grounds that they violated the Administering Authority's rights and duties under the U.N. Charter and the Trusteeship Agreement for the Former Japanese Mandated Islands.[6]

But still more basic legal problems are posed by these experiments, problems which have received less public attention. These concern the international law principle of freedom of the seas and its attendant corollaries, freedom of navigation (of both the sea and the air), and freedom from interference with the lawful pursuit of maritime industries (fishing, transport, and the like). Finally, the interesting question of pollution of international waters and air space has been cast at once into a different and a compelling form.

There is every reason to believe that the Pacific experiments will continue [7] and that the legal issues which they present will persist. Opponents of the hydrogen bomb may be expected to raise these issues with increasing frequency and intensity as the armaments race progresses. It is extremely important to American prestige in the world community that the case against continuation of these tests in the Pacific Proving Grounds be carefully examined.

THE BROADER ISSUE: FREEDOM OF THE SEAS

The Facts

The first atomic weapons tests conducted by the United States outside its own territorial limits took place on Bikini atoll in the Marshall Islands in 1946. The following year, three island groups, the Marshalls, the Carolines, and the Marianas, were placed under United Nations trusteeship, with the United States as Administering Authority.[8] Upon United States insistence, the entire territory—comprising ninety-eight distinct islands and island units with a combined land area of 846 square miles, spread over some three million square miles of ocean—was set up as "strategic" under Article 82 of the U.N. Charter.[9] Article 13 of the Trusteeship Agreement establishes the right of the

4. The petition was prompted by radioactive fallout on several hundred Marshallese who were "suffering in various degrees from 'lowering of the blood count,' burns, nausea and the falling off of hair from the head, and whose complete recovery no one can promise with certainty." *Petition from the Marshallese People Concerning the Pacific Islands*, U.N. Doc. No. T/Pet. 10/28 (1954).

5. U.N. Doc. No. T/C.2/L.101 (1954) (Soviet resolution); and U.N. Doc. No. T/C. 2/L.104 (1954) (Indian resolution).

6. Trusteeship Agreement for the Former Japanese Mandated Islands, July 18, 1947, 61 STAT. 3301, T.I.A.S. No. 1665 (cited hereinafter as TRUSTEESHIP AGREEMENT).

7. See statement of Admiral Lewis L. Strauss, Chairman of the U.S. Atomic Energy Commission, N.Y. Times, Sept. 10, 1954, p. 1, col. 3.

8. See TRUSTEESHIP AGREEMENT.

9. See GOODRICH & HAMBRO, CHARTER OF THE UNITED NATIONS, 452-53 (2d ed. 1949). This is the only "strategic" trust territory in existence.

Administering Authority to close any areas of this "strategic" territory at any time "for security reasons."

On December 2, 1947, the U.S. Atomic Energy Commission (AEC) announced that Eniwetok atoll in the Marshall Islands had been selected as a proving ground for routine experiments in atomic weapons. Its inhabitants were resettled on Ujelang atoll.[10] According to the AEC, Eniwetok was chosen because it had the fewest inhabitants to be cared for, 145, "it is isolated and there are hundreds of miles of open seas in the direction in which winds might carry radioactive particles."[11] Eniwetok and its surrounding waters were first established as a "danger area" on December 30, 1947, for a period of one year.[12] The warning area was established "until further notice" toward the close of 1948.[13] It was the AEC's view that the larger test detonations could not be carried out within continental United States with the requisite degree of safety[14]—the largest proving ground in this country being a 640 square mile tract in Nevada.

In preparation for the thermonuclear test series of March-April 1954, the Pacific Proving Grounds were extended to include Bikini atoll once again in order "to accommodate the rapidly expanding program of developing and testing new and improved nuclear weapons," and "because of the limited size of Eniwetok."[15] Shortly after this expansion, the United States Navy Hydrographic Office advised that "the danger area surrounding Eniwetok and Bikini atolls, dangerous to all ships, aircraft, and personnel entering it, has been enlarged and redefined . . . ."[16] The new area formed a rectangle of open sea around the two atolls of approximately 50,000 square miles.[17]

10. The 160 inhabitants of Bikini had already been removed from Bikini prior to the 1946 tests and placed on Rongerik atoll; they were eventually relocated on Kili Island in the southern Marshalls. NAVY DEP'T, TRUST TERRITORY OF THE PACIFIC ISLANDS 3 (1948); *Petition from the Marshallese People Concerning the Pacific Islands*, U.N. Doc. No. T/Pet.10/28 (1954).

11. AEC Press Release No. 70, Dec. 1, 1947.

12. AEC Press Release No. 77, Dec. 30, 1947. The area was delineated as follows: "Beginning with a point at 10°-15' North latitude and 160°-35' East longitude, north along the meridian of 160°-35' East longitude to a point at 12°-45' North latitude, 160°-35' East longitude thence East along the parallel of 12°-45' North latitude to a point at 12°-45' North latitude and 163°-55' East longitude, thence south along the meridian of 163°-55' East longitude to a point at 10°-15' North latitude and 163°-55' East longitude, thence west to the point of beginning."

13. AEC Press Release No. 147, Dec. 15, 1948.

14. 13 AEC SEMIANN. REP. 81 (1953).

15. AEC Press Release No. 478, April 2, 1953. See also letter dated April 2, 1953 from Representative of the United States Addressed to Secretary-General Relating to Trust Territory of the Pacific Islands, U.N. Doc. No. S/2978 (1953).

16. Letter from Shelby Thompson, Acting Director, Division of Information Services, AEC, to Emanuel Margolis, Aug. 9, 1954, on file in Yale Law Library (hereinafter cited as Thompson Letter), quoting U.S. Navy Hydrographic Office, Mariner's Notice No. 21, p. 971, art. 2716, item 1, May 23, 1953.

17. It included "that area of about 150 miles by 335 miles centered midway between Eniwetok and Bikini atolls . . . ." *Ibid.*

On April 3, 1954, following the exposure of a number of Japanese fishermen to radiation and the confiscation of radioactive fish by the Japanese Government,[18] the "danger area" was expanded several times in magnitude, so that it encompassed some 400,000 square miles.[19]

The Law

> *"International law had its origin in the attempt to set up some law which would be respected and observed upon the seas, where no nation had right of dominion and where lay the free highways of the world."*
>
> —Woodrow Wilson[20]

During the late middle ages, claims of sovereignty over portions of the open sea were made by many states including the Republics of Venice and Genoa, Portugal, Spain, Sweden, Denmark, and England.[21] The primary motivation for these claims appears to have been a desire on the part of the maritime powers to develop and maintain trading monopolies.[22] Their claims of sovereignty assumed such forms as levying tolls upon foreign ships, proscribing fisheries to foreigners, and, in certain instances, prohibiting foreign shipping altogether. Concomitant to such claims, however, there usually ran an obligation of the maritime power to police his sovereign sea against piracy.

It is difficult to locate, in point of time, the shift in international usage and diplomacy from the doctrine of sovereignty over the seas to the principle of freedom of the seas. Some scholars trace its beginnings as far as the twelfth century.[23] But the first clear, forceful and successful application of the principle is generally attributed to Queen Elizabeth.[24] And the first scholarly statement of freedom of the seas as a principle of law is found in the *Mare Liberum* of Hugo Grotius, published in 1609.[25] Since the sea could not be

18. See text at notes 45-53 *infra* for a fuller description of these facts.

19. The new area was "to include a sector centered at 12° 00′ N., and 164° 00′ E., extending clockwise from 240° true to 95° true; from the center out to a distance of 450 nautical miles." Thompson Letter, quoting U.S. Navy Hydrographic Office, Mariner's Notice, No. 14, p. 1685, April 3, 1954.

20. Address before joint session of Congress, April 2, 1917. 55 CONG. REC. 103 (1917).

21. See HALL, INTERNATIONAL LAW, 179-80 (8th ed., Higgins, 1924); 1 GIDEL, LE DROIT INTERNATIONAL PUBLIC DE LA MER 129-33 (1932).

22. SMITH, LAW AND CUSTOM OF THE SEA 43-44 (2d ed. 1950).

23. See Valéry, *Le Pape Alexandre III et la Liberté des Mers*, 14 REVUE GÉNÉRALE DE DROIT INTERNATIONAL PUBLIC 240 (1907). The author cites a letter of Pope Alexander III to the Genoese, dated Oct. 11, 1169, arguing in favor of the principle of freedom of the seas. However, Valéry concedes the complete ineffectiveness of this gesture at the time. *Id.* at 241, 250.

24. In the disputes with Portugal and Spain which came to a head in the year 1580 over a voyage by Drake, the English position was based explicitly on principles of natural law. In the words of Queen Elizabeth: "The use of the sea and air is common to all; neither can any title to the ocean belong to any people or private man, forasmuch as neither nature nor regard of the public use permitteth any possession thereof." Quoted in SMITH, *op. cit. supra* note 22, at 44.

25. Its first English translation by Magoffin in 1916 bore the telling title: THE FREE-

subjected to effective occupation or possession, Grotius argued, it was by nature free of the sovereign control of any single state or group of states. Although they met with considerable opposition throughout the remainder of the seventeenth century,[26] Grotius' ideas gradually gained the adherence and support of the leading maritime states.[27] By the beginning of the eighteenth century,[28] freedom of the open seas was fairly well established in the law[29] and practices of nations. By the nineteenth century it was axiomatic. In the twentieth it came to occupy a prominent place in Wilson's "Fourteen Points" and the "Atlantic Charter."[30] In its modern form as a rule of international law, freedom of the seas is said to subsume four distinct "freedoms":

DOM OF THE SEAS ("OR, THE RIGHT WHICH BELONGS TO THE DUTCH TO TAKE PART IN THE EAST INDIAN TRADE").

26. See, *e.g.*, GENTILI, ADVOCATIO HISPANICA (1613); SELDEN, MARE CLAUSUM SEU DE DOMINIO MARIS (1635). Brierly describes this period: "As yet there was no general hostility to the existence of sovereignty over the sea; what the nations wanted, and what they gradually succeeded in establishing, was freedom of navigation, which was quite consistent with the existence of sovereignty . . . ." BRIERLY, THE LAW OF NATIONS 224 (4th ed. 1949). Even Great Britain herself, at this time concerned with monopolizing certain fisheries in her adjacent seas, turned a hostile ear to the Grotian thesis, and attempted to revive her fading claims to sovereignty in the "British Seas." SMITH, *op. cit. supra* note 22, at 43.

27. The issue "was settled in the seventeenth century by the political decline of states putting forward such claims [of sovereignty]; by the coordination of British and Dutch policies and by the ascendancy of the English fleet . . . . This fleet, once it had become *de facto* mistress of the high seas, had no longer any interest in supporting Selden's outdated arguments." U.N. Secretariat, *Regime of the High Seas*, U.N. Doc. No. A/CN.4/32, at 3 (1950) (Memorandum to Int'l Law Comm'n). But *cf.* declaration by the law officers of the British Crown in 1851: "We consider it to be settled by the highest authorities of the English Law that the Dominion of the whole Sea which surrounds England belongs to the Crown . . . ." Quoted in 2 SMITH, GREAT BRITAIN AND THE LAW OF NATIONS 113 (1935).

28. Gidel contends that the principle of freedom of the seas has been "an unchallenged principle of international public maritime law" since the end of the seventeenth century. 1 GIDEL, *op. cit. supra* note 21, at 199. See also François, *Report on the High Seas*, U.N. Doc. No. A/CN.4/17, at 3 (1950) (Report to Int'l Law Comm'n). Nevertheless, throughout the eighteenth century and part of the nineteenth, vessels entering waters regarded by Great Britain as "British Seas" had to salute the British flag. See HALL, *op. cit. supra* note 21, at 185. And fishing prerogatives were yielded even more slowly. Indeed, claims to such prerogatives continue to be made today, *e.g.*, the current dispute between Korea and Japan over the former country's claims.

29. See Lord Stowell in Le Louis, 2 Dods. 210, 243, 165 Eng. Rep. 1464, 1475 (Adm. 1817): "all [nations] have an equal right to the uninterrupted use of the unappropriated parts of the ocean for their navigation." And Story, J., in The Marianna Flora, 24 U.S. (11 Wheat.) 1, 42 (1826): "Upon the ocean . . . in time of peace, all possess an entire equality. It is the common highway of all, appropriated to the use of all; and no one can vindicate to himself a superior or exclusive prerogative there."

30. Point 2 of the "Fourteen Points" called for "[a]bsolute freedom of navigation upon the seas." 56 CONG. REC. 680 (1918). The 7th principle of the Atlantic Charter declared: "such a peace should enable all men to traverse the high seas and oceans without hindrance." Atlantic Charter, Aug. 14, 1941, 55 STAT. 1603, E.A.S. No. 236.

"1. Freedom of navigation on the high seas, subject to the exclusive control, in the absence of a contrary convention, of the state whose flag the ship carries.
"2. Freedom of fisheries on the high seas, subject to the same conditions.
"3. Freedom to lay submarine cables on the high seas.
"4. Freedom of aerial movement above the high seas."[31]

Freedom of the seas is an absolute freedom to use the high seas except to the extent that international custom and treaties have modified it in order to meet the needs of a continually "smaller" and more dynamic international community. Thus, this freedom, not unlike our own constitutional guarantees of freedom, has not deteriorated into a total absence of restraint.[32] "General" and "special" police powers over portions of the sea have come to be exercised by groups—sometimes all—of the maritime states.[33] Among the general police powers exercised on the high seas in time of peace are the repression of piracy, self-defense, hot-pursuit, and the so-called "right of approach." Special police powers are created only by treaty, and are exercised in the relations between the signatories. Principal among these have been the slave trade prohibition, control of fisheries, and the supervision of submarine telecommunication cables.

In recent years, some unilateral encroachments upon the orthodox doctrine of freedom of the seas have been made by leading maritime powers with the tacit acceptance of others. A "contiguous zone" beyond the three-mile belt of territorial seas, for purposes of enforcement of customs, immigration, sanitation, or police regulations, appears to be fairly well recognized in the practice of states.[34] And more recently, a number of states have claimed jurisdiction over the sea-bed and sub-soil of portions of the ocean adjacent to their coast—in some cases a claim of millions of square miles. The legal justification for such claims is far from clear. Perhaps the classical pronouncement of this "doctrine of the continental shelf" was that of President Truman which stipulated that "the character as high seas of the waters above the continental shelf and the right to their free and unimpeded navigation are in no way thus affected."[35]

31. From the Resolution on "La Navigation en Haute Mer," adopted by the Institute of International Law, found in [1927] 3 ANNUAIRE DE L'INSTITUT DE DROIT INTERNATIONAL 339 (translated from the French).

32. "[L']absence de souveraineté territoriale n'est pas synonyme de carence du droit international." Raestad, *La Chasse à la Baleine en Mer Libre*, 2 REVUE DE DROIT INTERNATIONAL 595, 634 (1928).

33. "General" and "special" police powers are used here in the same sense as they are employed by Gidel. "General" police powers may be exercised independently of treaty rights, and emerge "purely and simply" from custom; they are also "general" in the sense of not being limited to particular maritime zones. By contrast, "special police measures" exist only by virtue of treaties, and apply exclusively to the states which are parties to them. 1 GIDEL, LE DROIT INTERNATIONAL DE LA MER 288-89 (1932).

34. See the article and commentary on the "Contiguous Zone" submitted by the U.N. International Law Commission. International Law Commission, *Report*, U.N. GENERAL ASSEMBLY OFF. REC., 8th Sess., Supp. No. 9, at 19 (Doc. No. A/2456) (1953).

35. 10 FED. REG. 12303 (1945). See also Argentine Declaration in 41 AM. J. INT'L L. SUPP. 11 (1947).

Bearing these exceptions in mind, the rule of law remains clear: no state can exercise sovereignty over the high seas in time of peace.[36] The natural-law theories which were used at first to support this principle have given way to a more pragmatic rationale: since the seas form a necessary means of transportation and communication among nations, their free use is indispensable to international trade and navigation.[37]

These general principles of law and the needs of the international community which they are designed to fulfill have a direct bearing on the nuclear experiments in the Pacific Proving Grounds. The establishment there of a 400,000 square mile "warning area" cannot be reconciled with freedom of navigation on the high seas and in the air space above the seas. The completely humanitarian purpose behind the establishment of such an area—that of warning ships and planes of a very real hazard to their safety—loses its force as a logical and legal justification when it is recalled that the hazard is artificially introduced. As one of the leading legal authorities in the United Kingdom, Earl Jowett, put the issue:

> "I am entirely satisfied that the United States, in conducting these experiments, have taken every possible step open to them to avoid any possible danger. But the fact that the area which may be affected is so enormous at once brings this problem: that ships on their lawful occasions may be going through these waters, and you have no right under international law, I presume, to warn people off."[38]

No "general police power" can be found to justify fencing off from the maritime and air traffic of other nations hundreds of thousands of square miles of open sea and air space including waters forming "a useful route for international maritime traffic."[39]

Quarantining this area of high seas must, then, be based upon treaty arrangements, as an exercise of a form of "special police power." The only treaty provision which has any relevance to the problem is Article 13 of the "Trusteeship Agreement for the Former Japanese Mandated Islands" which provides that the Administering Authority (the United States) may close any part of the Trust Territory at any time for reasons of security.[40] Article 13 undoubted-

36. Whether viewed juridically as *res nullius* (a thing belonging to no one) or *res communis* (a thing belonging to everyone), the rule loses none of its efficacy for the purposes of the discussion here.

37. "The real reason for the freedom of the open sea is represented in the motive which led to the attack against maritime sovereignty, and in the purpose for which such attack was made—namely, the freedom of communication, and especially commerce, between the States which are severed by the sea." 1 OPPENHEIM, INTERNATIONAL LAW 544 (7th ed., Lauterpacht 1948).

38. 186 H.L. Deb. (5th Ser.) 808-09 (1954). The Marquess of Salisbury, representing the Foreign Office in these debates over the Pacific thermonuclear experiments, felt compelled to concede the point. *Id.* at 810.

39. The phrase is borrowed from the opinion of the court in Corfu Channel Case, Judgment of April 9, 1949, [1949] I.C.J. Rep. 4, 28.

40. Although objected to as establishing a dangerous principle, Article 13 nonethe-

ly authorizes the United States at any time to close off any or all of the Pacific islands in the Territory, including their territorial waters—approval by a major organ of the international community, the U.N. Security Council, having been given in advance by the terms of the Agreement. The authority of Article 13 was exercised when the land and air space of Bikini and Eniwetok atolls "and the territorial waters adjacent thereto" were closed for the purposes of conducting atomic and thermonuclear experiments.[41] But neither Article 13 nor any other provision of the Agreement states anything about the sea and air space *beyond* the territorial limits of the islands comprising the Trust Territory. The centuries-old principles of freedom of navigation on the open seas and freedom of the air space above these seas remain untouched and undiluted. The conclusion is thus inescapable that the warning zone announced by the AEC in December 1947 and enlarged in May 1953 and April 1954 can find no authorization in any treaty.

It goes without saying that the setting up of so vast a warning zone was prompted by a desire on the part of the United States to protect the lives and property of "intruders." But humanitarian ends have led the United States deeper and deeper into this legal dilemma: the greater the degree of precaution, the greater the interference with freedom of navigation on the high seas. The very nature of these experiments is such that, to the extent that adequate safety measures are taken, traditional and universally accepted rules of international law must be violated.

Thermonuclear tests pose also a practical dilemma. The protection of persons and ships from the fallout of radioactive ash militates in favor of expanding the warning area. But the more the area is increased, the more difficult it becomes to police it adequately. Admiral Strauss, chairman of the AEC, has stated that there have been "many instances where accidents or near accidents have resulted from inadvertent trespass in such warning areas. The very size of them makes it impossible to fence or police them."[42]

Thus, expansion of the warning area—despite the humanitarian intentions which motivate it—piles contradiction upon contradiction.

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less was adopted by the unanimous vote of the U.N. Security Council at its 124th meeting, April 2, 1947. Its full text reads: "The provisions of Articles 87 and 88 of the Charter shall be applicable to the Trust Territory, provided that the Administering Authority may determine the extent of their applicability to any areas which may from time to time be specified by it as closed for security reasons." Article 87 of the Charter gives the Trusteeship Council the right, *inter alia*, to make periodic visits to the trust territory. U.N. Article 88 imposes a duty on the administering authority to make an annual report to the General Assembly on the "political, economic, social and educational advancement" of the inhabitants of the trust territory in response to a questionnaire prepared by the Trusteeship Council.

41. See letters from the Representative of the United States directed to the United Nations, informing the organization formally of the closing of these atolls. U.N. SECURITY COUNCIL OFF. REC., 2d year, Supp. No. 20, Annex 46, at 169 (Doc. No. S/613) (1947); U.N. Doc. No. S/2978 (1953).

42. From his statement to the press of March 31, 1954, inserted by Rep. Sterling Cole into 100 CONG. REC., 4234 (daily ed. April 2, 1954).

RADIOACTIVITY: ITS INTERNATIONAL LAW ASPECTS

The Facts

The exact extent to which the thermonuclear experiments of March-April 1954 contaminated the waters and the air space within, as well as without, the warning area is not completely clear. What is clear, however, are the serious questions of law raised by the injury to men, to ships, and to fish caused by the fallout of radioactive ash from the explosions. And from the mushroom of reports and allegations following the March 1st explosion, a number of fairly indisputable facts emerge.

The thermonuclear detonation of March 1, 1954, exposed 236 Marshallese and twenty-eight United States personnel to radiation when an unexpected shift in the winds placed the islands of Rongelap, Rongerik, and Uterik in the path of the fallout.[43] The AEC subsequently reported that the atmosphere above "7,000 square miles of territory downwind from the point of burst was so contaminated" from radioactive fallout that survival in the area would have depended upon "prompt evacuation of the area or upon taking shelter and other protective measures."[44]

On March 14, 1954, the Japanese fishing boat *Fukuryu Maru* reached port with both the ship and its catch radioactive. The log of the vessel showed that it had been approximately eighty miles off Bikini when the March 1st explosion occurred.[45] All twenty-three crew members were suffering from exposure to radiation and were immediately hospitalized, five being placed on the danger list.[46] On September 23, 1954, Aikichi Kuboyama died from radiation sickness, while the other twenty-two crewmen continued to undergo treatment in Tokyo hospitals.[47] In June five crewmen of a Japanese freighter which had passed within 1,200 miles of the bomb-test area were hospitalized with radiation sickness, and were reported to be "gradually recovering."[48]

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43. Announcement by the AEC, N.Y. Times, March 12, 1954, p. 1, col. 1. Not all of the injuries resulted directly from the fallout. The inhabitants of the islands affected by the fallout apparently had not been warned about the explosions and did not know that the water on these islands had become dangerous to drink. See U.N. Doc. No. T/C.2/SR. 197, at 5 (1954).

According to Sen. Mike Mansfield (Montana), the Marshallese were still suffering from the various symptoms of radiation sickness months after the March 1st explosion. 100 CONG. REC., 7681 (daily ed. June 14, 1954). See also *Petition from the Marshallese People Concerning the Pacific Islands*, U.N. Doc. No. T/Pet.10/28 (1954). These contentions contrast sharply with the statement of Admiral Strauss: "The 236 natives appeared to me to be well and happy." Statement cited note 42 *supra* at 4234.

44. N.Y. Times, Feb. 16, 1955, p. 18, col. 4, para. 23.

45. N.Y. Times, March 17, 1954, p. 9, col. 4. Arnold, *Effects of the Recent Bomb Tests on Human Beings*, 10 BULL. ATOM. SCIENTISTS 347 (1954), states that it is now agreed that the ship was "definitely outside the 30,000 square mile prohibited zone, and 72 miles from the test site, at the time of the first test on March 1." But *cf.* the opinion of Admiral Strauss that the ship must have been "well within" the warning area. Statement cited *supra* note 42, at 4234.

46. N.Y. Times, March 17, 1954, p. 1, col. 5, p. 9, col. 3.

47. N.Y. Times, Sept. 24, 1954, p. 10, col. 3.

48. N.Y. Times, June 5, 1954, p. 2, col. 6.

In addition to the injuries to fishermen, the Japanese fishing industry itself was seriously affected. Over four thousand pounds of the *Fukuryu Maru*'s tuna catch were ordered buried by Japanese sanitation authorities.[49] Another fishing vessel, the *Shunyo Maru*, was found to be radioactive and its catch contaminated on its arrival in Japan. On March 1st, it had been some 1,000 miles from Bikini; the nearest it ever approached the test area was 200 miles, six days after the explosion.[50] The *Shoho Maru* and *Kaifuku Maru* arrived in port on April 8, 1954, with cargoes of radioactive tuna, but none of their crew members were injured.[51] The captains of both vessels said they had pursued courses clearly outside the Bikini-Eniwetok test area. Throughout April and May reports emanated from Japan of further radioactivity in ships and their catch—ships whose closest distance to Bikini ranged from 1,000 to 2,000 miles. Of the 33,000 tons of fish from 905 boats inspected through June 20, 1954, 135 tons from 77 boats were condemned.[52] And Professor Takajiro Mori of Tokyo University declared on October 6, 1954, that the number of radioactive fish caught was increasing. In March, nearly all contaminated fish were caught in or near the Bikini test area. But by April, large numbers were found off Formosa, and in June radioactive fish were caught off the Japanese coast.[53]

This series of events could not fail to produce hardship for the Japanese fishing industry—a very important segment of that nation's economy, providing the main source of protein in the Japanese diet. Significant quantities of fish were destroyed. What was not destroyed people were afraid to eat. Export of fish became increasingly difficult, for importers feared that consumer resistance in their countries would be strong. On April 1, 1954, the Japanese Foreign Office formally requested the United States to call off its Pacific tests from November through March, the best fishing season. It also asked for prior notification of any future tests and a relaxation of the restricted area in the Marshalls to permit fishing when no tests were scheduled.[54] The request for advance notification was formally refused.[55]

Shortly after the *Fukuryu Maru* incident, the United States announced its readiness to make monetary compensation for personal and property damages sustained by Japanese nationals.[56] After months of negotiation, the matter

49. N.Y. Times, March 17, 1954, p. 1, col. 5, p. 9, col. 4.

50. Manchester Guardian Weekly, March 25, 1954, p. 2, col. 3.

51. N.Y. Herald Tribune, April 9, 1954, p. 9, col. 5. About one-third of the thirty-five tons of tuna fish caught by the *Kaifuku Maru* were ordered confiscated because it registered a radioactive count of 100 impulses a minute. Six fish of the *Shoho Maru* registered a count of 60-1300 impulses a minute.

52. Arnold, *Effects of the Recent Bomb Tests on Human Beings*, 10 BULL. ATOM. SCIENTISTS 347-48 (1954): "The criterion used was a counting rate of 100 counts per minute four inches from the body of the fish, on a Geiger tube whose normal background was 20-30 counts per minute."

53. N.Y. Times, Oct. 7, 1954, p. 25, col. 4.

54. N.Y. Times, April 1, 1954, p. 26, col. 1.

55. N.Y. Times, July 10, 1954, p. 5, col. 3.

56. See statement of Admiral Strauss, 100 CONG. REC. 4234 (daily ed. April 2, 1954).

was settled on January 4, 1955, through an exchange of notes between the Japanese Foreign Minister and the United States Ambassador to Japan.[57] The United States tendered to the Government of Japan "*ex gratia*" and "without reference to the question of legal liability, the sum of two million dollars for purposes of compensation for the injuries or damages sustained" by Japanese nationals as a result of the thermonuclear tests. The sum was tendered and accepted "in full settlement of any and all claims" against the United States, "or its agents, nationals or juridical entities."

The Law

The emergence of nuclear energy as an instrument of warfare has brought with it legal questions of the utmost gravity. There is no consensus of authoritative legal opinion as to the compatibility of the employment of weapons of such incalculable[58] destructive power with the laws of war.[59] And even the

57. Notes Regarding Bikini Claims, Dep't of State Press Release No. 6, Jan. 4, 1955.

58. The term "incalculable" is used advisedly. Comprehensive and exact scientific analysis of the direct and indirect physical effects—such things as sterility in both men and women, genetic mutations, cataracts, susceptibility to secondary bacterial infections—let alone the psychological effects, produced by the atomic bombing of Hiroshima (August 6, 1945) and Nagasaki (August 9, 1945) upon the Japanese who managed to survive appears to be no longer possible. See LOS ALAMOS SCIENTIFIC LABORATORY, THE EFFECTS OF ATOMIC WEAPONS 339-65 and *passim* (1950); GROBMAN, OUR ATOMIC HERITAGE 62-81 (1951). And "in the space of time from Hiroshima to the present the incredible power of the uranium bomb has been dwarfed almost a thousand-fold by the awesome force of the hydrogen weapon." Sawyer, *The H-Bomb Chronology*, 10 BULL. ATOM. SCIENTISTS 287, 300 (1954). Furthermore, the series of explosions since World War II has given rise to serious concern among scientists over the dispersion of radioactive products and their immediate, delayed, and remote effects. This dispersion, according to an eminent geneticist, will unquestionably produce genetic mutations the overwhelming majority of which are deleterious and likely to produce a significant rise in defective individuals in succeeding generations. Sturtevant, *Social Implications of the Genetics of Man*, 120 SCIENCE 405-07 (1954). Making every effort to be conservative—"the true value could possibly be 100 times greater"—Sturtevant calculates that 1,800 of the 90,000,000 children born in the world last year were adversely affected by radiation from thermonuclear tests. Quoted in Plumb, *Science in Review*, N.Y. Times, Jan. 16, 1955, § 4, p. 11, cols. 6-7. Calling attention to the atomic experiments which the Great Powers have carried on in recent years, Edgar D. Adrian, English physiologist and Nobel Prize winner, declared: "We must face the possibility that repeated atomic explosions will lead to a degree of general radioactivity which no one can tolerate or escape." N.Y. Times, Sept. 2, 1954, p. 23, col. 8. Another Nobel Prize winner, the French physicist Prince Louis de Broglie, writes that the complexity of physical phenomena produced by the hydrogen bomb explosions to date, has already removed the possibility of accurately calculating their effects. N.Y. Times, Nov. 23, 1954, p. 5, col. 4. The Federation of American Scientists recently asked the U.N. to study the problem of radioactive contamination of the world's atmosphere from bomb tests, to obtain scientific data on the intensity of radiation produced, and to establish the "danger threshold" to human beings, physically and genetically, from radiation. N.Y. Times, March 7, 1955, p. 1, col. 3, p. 12, cols. 4-8.

59. A reasoned and balanced discussion of this problem may be found in 2 OPPENHEIM, INTERNATIONAL LAW 347-52 (7th ed., Lauterpacht 1952). For a statement arguing the

testing of these devices presents legal problems of perhaps less magnitude, but of far greater immediacy. The newness of atomic weapons makes an analysis of these problems on the basis of relevant rules of international law a difficult task. There are no general principles on all fours with the issue, nor are there treaty provisions setting forth such clear "Thou shalt not's" as to leave no room for doubt with regard to conducting thermonuclear experiments.

But this is not to say that thermonuclear tests are beyond the scope of international law at its present stage of development. To begin with, the law of fisheries on the high seas is applicable. Secondly, the radioactivation of extensive areas of seas and air space may by analogy fall within the rules which are emerging under the inchoate doctrine of "pollution" in international law. And finally, the "Trusteeship Agreement for the Former Japanese Mandated Islands" contains a number of provisions which impose rather specific responsibilities upon the United States, offering still another frame of reference within which the legal character of the tests may be measured.

The Law of Fisheries

The cordoning off of a vast area of the Pacific for extended periods combined with radioactive fallout from the test explosions seriously impaired and interrupted the fishing industry of Japan. That this interruption is a violation of the international law rule of freedom of fisheries on the high seas is apparent from the broad terms in which that doctrine has been cast, admitting of qualification only by restrictions imposed by treaty:[60]

> "All states are entitled to claim for their nationals, and their nationals are entitled to claim from other states . . . the right to utilize the high seas with their private vessels for any legitimate purpose, such as . . . fishing . . . except in so far as these rights have been surrendered by treaty agreements."[61]

Similarly, the United Nations International Law Commission has asserted that "it may be contrary to the very principle of freedom of the seas to encourage or permit action which amounts to an abuse of a right and which is apt

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illegality of the use of such weapons, see SPAIGHT, AIR POWER AND WAR RIGHTS 273-77 (3d ed. 1947). Fenwick speaks of the "doubtful legality of the atomic bomb." FENWICK, INTERNATIONAL LAW 559 (3d ed. 1948). See, also speech by W.H. Moore, General Secretary of the International Law Association, N.Y. Times, Aug. 10, 1954, p. 9, col. 2. For the contrary view see Stimson, *The Decision to Use the Atomic Bomb*, 194 HARPER'S MAG. 97 (1947); Stowell, *The Laws of War and the Atomic Bomb*, 39 AM. J. INT'L L. 784 (1945); Baxter, *The Role of Law in Modern War*, 47 PROC. AM. SOC'Y INT'L L. 90 (1953), and *Discussion, id.* at 119.

60. See para. 2 in text at note 31 *supra*.

61. POTTER, THE FREEDOM OF THE SEAS 101 (1924). According to Gidel: "The idea which underlies the law of the sea is the freedom of lawful and normal utilization of the maritime space; all unnecessary restrictions upon this freedom should be avoided." 3 GIDEL, LE DROIT INTERNATIONAL PUBLIC DE LA MER 674 (1934) (translated from the French). See also United States v. California, 332 U.S. 19, 35 (1947).

to destroy the natural resources whose preservation and common use have been one of the main objects of the doctrine of the freedom of the sea."[62]

Moreover, states have a clear duty under international law to prevent activities, particularly those of its own agencies, which endanger lives or injure property of nationals of other states in time of peace. Some authorities explain this duty to prevent injury by the emerging and still somewhat controversial doctrine of "abuse of rights": a state is liable for indemnity when it exploits a right it possesses under international law "in such a way as to inflict upon another State an injury which cannot be justified by a legitimate consideration of its own advantage."[63]

Whether viewed as a violation of the law of fisheries or an abuse of right, the conclusion remains the same: the interference with the interests of other nations in fishing the high seas caused by the hydrogen bomb tests incurs the responsibility of the United States for resulting damages.

The Law of Pollution

The injurious effects of the thermonuclear explosions may be viewed also within the juridical context of the responsibility of states to prevent pollution of international waters and air space. To date, concern over the problem of pollution of international waters has been restricted almost exclusively to pollution from the discharge of oil by ships.[64] And, while international bodies have given the matter increasing attention over the past few decades,[65] and various states have passed legislation aimed at ameliorating its wasteful and unsanitary after-effects,[66] the nations thus far have been unsuccessful in their efforts to regulate pollution by general treaty or convention.

Nevertheless, judicial tribunals have used general principles of law and equity to resolve disputes concerning pollution. Some of the leading cases on

62. International Law Commission, *Report*, U.N. GENERAL ASSEMBLY OFF. REC., 8th Sess., Supp. No. 9, at 18 (Doc. No. A/2456) (1953).

63. See 1 OPPENHEIM, INTERNATIONAL LAW 313 (7th ed., Lauterpacht 1948). According to the U.N. International Law Commission, "the prohibition of abuse of rights is supported by judicial and other authority .... A State which arbitrarily and without good reason, in rigid reliance upon the principle of freedom of the seas, declines to play its part in measures reasonably necessary for the preservation of valuable, or often essential, resources from waste and exploitation, abuses a right conferred upon it by international law." International Law Commission, *supra* note 62, at 18.

64. See, *e.g.*, 1 GIDEL, *op. cit. supra* note 61, at 480-84; HIGGINS & COLOMBOS, THE INTERNATIONAL LAW OF THE SEA 291-93 (2d ed. 1951).

65. See INTERNATIONAL LAW ASSOCIATION, REP'T OF 33D CONFERENCE, 1924, pp. 336-42 (1925); WASHINGTON PRELIMINARY CONFERENCE ON OIL POLLUTION OF NAVIGABLE WATERS (1926); ORGANIZATION FOR COMMUNICATIONS AND TRANSIT, POLLUTION OF THE SEA BY OIL (LEAGUE OF NATIONS PUB. No. 1935.VIII.5) (1935). More recently, see the discussions which have taken place in the Transport and Communications Commission of the U.N. Economic and Social Council, particularly the report by the Secretary-General, *Pollution of Sea Water*, U.N. Doc. No. E/CN.2/134 (1952).

66. See, *e.g.*, Oil in Navigable Waters Act, 1922, 12-13 Geo. 5, c. 39; Oil Pollution Act, 43 STAT. 604 (1924), 33 U.S.C. §§ 431-37 (1952).

the subject are decisions of the United States Supreme Court in disputes between states of the union. In such cases the Court has established the following rule: a state may be enjoined from conduct which pollutes interstate waters, or waters flowing into a neighboring state, if it can be shown that the pollution and its effects are of sufficiently "serious magnitude."[67]

This same "serious magnitude" test was recognized and applied as a rule of international law by an arbitral tribunal in the *Trail Smelter Case*.[68] The United States received an indemnity award of $78,000 for damages to land, crops, and trees in the state of Washington from sulphur dioxide fumes emitted by a Canadian smelting company. The tribunal ruled that "no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of *serious consequence* and the injury is established by clear and convincing evidence."[69] If such a restriction is imposed upon the use by a state of its own territory, it would seem to apply with even greater force to the use of a Trust Territory—a land which is being held in "trust" under "a relation of service and delegation wholly incompatible with any exclusiveness of rights of sovereignty on the part of the State concerned."[70] And if sulphur dioxide fumes giving rise to damages of $78,000 is a "case of serious consequence," how much more so is the radioactivation of thousands of square miles of high seas and the air space above these seas. Surely the rule of *Trail Smelter* applies directly to serious injury to persons and property on the high seas, since "a ship on the high seas is assimilated to the territory of the State the flag of which it flies."[71] It is somewhat less clear whether the *Trail Smelter* rule may be carried beyond injury to foreign nationals and foreign territory, and applied to the contamination of high seas fisheries, except perhaps by invoking a *res communis* theory with respect to the natural resources of the seas.

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67. New Jersey v. City of New York, 283 U.S. 473 (1931); New York v. New Jersey, 256 U.S. 296 (1921). *Cf.* Missouri v. Illinois, 200 U.S. 496 (1906) (Court refused to enjoin defendants from emptying sewage into tributary of Missouri River because it was not shown pollution was "of serious magnitude"). The force of such interstate cases as precedent in international law was recognized in Trail Smelter Case, Award of April 16, 1938, and March 11, 1941, 3 U.N. REP. INT'L ARBITRAL AWARDS 1905, 1964: "it is reasonable to follow by analogy, in international cases, precedents established by that court in dealing with controversies between States of the Union or with other controversies concerning the quasi-sovereign rights of such States, where no contrary rule prevails in international law and no reason for rejecting such precedents can be adduced from the limitations of sovereignty inherent in the Constitution of the United States."

68. Award of April 16, 1938, and March 11, 1941, 3 U.N. REP. INT'L ARBITRAL AWARDS 1905.

69. Trail Smelter Case, Award of April 16, 1938, and March 11, 1941, 3 U.N. REP. INT'L ARBITRAL AWARDS 1905, 1965 (emphasis added).

70. 1 OPPENHEIM, INTERNATIONAL LAW 215 (7th ed., Lauterpacht 1952).

71. The Case of the S.S. "Lotus," P.C.I.J. Ser. A., No. 10, p. 25 (1927).

Pollution which causes destruction of the high seas' natural resources has been condemned by authoritative international legal opinion. Thus, the Institute of International Law dealt with the problem at its 1937 conference, and passed a resolution calling upon all interested governments to study ways to eliminate practices injurious (*dommageables*) to marine life, such as the uncontrolled discharge of oil, bilge-water, rubbish, or other noxious (*nuisibles*) substances.[72] The resolution concluded:

> "In any case, the Institute is of the opinion that a State fails its international responsibilities if it neglects to take appropriate measures to prevent practices which, in the light of science, are manifestly contrary to rational exploitation and protection of the riches of the sea."[73]

Nevertheless, without specific treaty arrangements, and in the absence of international decisions squarely in point, the duty of states under international law to prevent pollution of international waters is as yet an inchoate one. The Supreme Court pollution cases and the *Trail Smelter Case* provide most helpful analogies. Bilateral treaties which deal with the problem (and there are very few of them) offer some guidance.[74] But there remains a need for the members of the international community—whether through the efforts of the U.N. Transport and Communications Commission,[75] or through the work of the Inter-Governmental Maritime Consultative Organization—to draw up a convention to regulate pollution of international waters. In the absence of a general convention of this type, binding upon all maritime states, the requirements of decisional and treaty law, with regard to the contamination of international waters and air space, are perhaps less clear than those of justice and equity.

The Trusteeship Agreement

Injury to health and property caused by radioactivity from the thermonuclear explosions are proscribed also by treaties to which the United States is a party—The United Nations Charter and the "Trusteeship Agreement for the Former Japanese Mandated Islands." The chapters of the U.N. Charter dealing with Non-Self-Governing Territories [76] and the International Trustee-

72. [1937] ANNUAIRE DE L'INSTITUT DE DROIT INTERNATIONAL 269.

73. *Id.* at 271 (translated from the French).

74. See, *e.g.*, Article IV of the Convention of Jan. 11, 1909, between Great Britain and the United States, dealing with the boundary waters between Canada and the United States: "the waters herein defined as boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other." 36 STAT. 2448, 2450, T.S. No. 548.

75. This Commission has already concerned itself with the question of the pollution of sea water by radioactive waste from atomic fuel used by ships. U.N. Doc. No. E/CN. 2/100 (1951).

76. U.N. CHARTER c. XI. Called by Ralph Bunche an "international charter of colonial

ship System [77] are not easily reconciled with conducting hazardous atomic experiments in the Marshall Islands. Article 73 establishes "the principle that the interests of the inhabitants of these territories are paramount." It speaks also of the "sacred trust" of the Administering Authority to promote the "well-being" of the territories' inhabitants and imposes an obligation "to ensure . . . their protection against abuses."[78]

Article 6 of the Trusteeship Agreement describes even more specifically the responsibilities of the United States as Administering Authority. The Administering Authority must promote the "economic advancement and self-sufficiency of the inhabitants"—a goal which is to be realized by encouraging "the development of fisheries, agriculture, and industries" and by protecting the inhabitants against the "loss of their lands and resources."[79] Article 6 also requires the Administering Authority to "protect the health of the inhabitants."[80] These duties, it should be noted, are unqualified imperatives. They are preceded by the word "shall" and are not diluted by the phrase "subject to the requirements of security" which qualifies several other key articles of the Agreement.[81]

Evacuation of the Marshallese from their home islands and injury to their health and fishing industry seem to contravene the treaty obligations assumed by the United States despite the broad powers granted it as Administering Authority. Under the provisions of Article 5 of the Trusteeship Agreement, the United States does have the right to station armed forces and to erect fortifications in the territory [82]—it having been designated as strategic. Equally unquestionable is the power of the Administering Authority under Article 13 to close any area of the territory "for security reasons."[83] But neither article can be interpreted as derogating from the obligations which Article 73 of the U.N. Charter and Article 6 of the Trusteeship Agreement place upon the Administering Authority. Article 13 of the Agreement stipulates that Articles 87 and 88 [84] of the Charter shall not apply to the "closed areas," but it says

administration." Bunche, *Trusteeship and Non-Self-Governing Territories in the Charter of the United Nations*, 13 DEP'T STATE BULL. 1037, 1040 (1945).

77. U.N. CHARTER c. XII.

78. During the committee discussion at the U.N. Conference on International Organization (San Francisco, 1945), the Netherlands Representative asked for assurance that the three most notorious forms of "abuse" would be provided for: (1) failure to protect their land, particularly arable land, (2) forced labor, and (3) racial discrimination. In reply, the U.S. Representative stated that he would regard it as clear that "the abuses you refer to are included in the abuses against which the people concerned are to be protected and the obligation referred to in paragraph 1 [ultimately incorporated into the Charter as Art. 73] covers this situation." See Doc. No. 1090, II/4/43, 10 U.N. CONF. INT'L ORG. DOCS. 563-64 (1945); Doc. No. 1115 II/4/44(1)(a), 10 *id.* at 619.

79. TRUSTEESHIP AGREEMENT, art. 6(2).

80. TRUSTEESHIP AGREEMENT, art. 6(3).

81. This qualifying phrase appears in Articles 7 and 8(1).

82. TRUSTEESHIP AGREEMENT, art. 5(1), (2).

83. TRUSTEESHIP AGREEMENT, art. 13.

84. See note 40 *supra*.

nothing about Article 73. Article 6 of the Agreement stands unqualified by security considerations.[85]

Thus, the legal problem posed by thermonuclear experiments in the Marshall Islands territory goes beyond caring for physical injuries already suffered by the Marshallese. The Administering Authority has a positive duty to take all possible steps to prevent recurrence of such injuries.[86] The duties imposed by the U.N. Charter and the Trusteeship Agreement produce a dilemma not unlike that created by the doctrine of freedom of navigation: the greater the precautions taken by the Administering Authority to protect the health of the Marshallese people, the greater the infringement of the rights guaranteed them by the Charter and Trusteeship Agreement. Removing them from the zone of danger [87] means removing them from their land in violation of Article 73 of the Charter and Article 6 of the Trusteeship Agreement. Ensuring their continued safety also means depriving them of fishing grounds for months at a time, contrary to the requirements of Article 6 of the Trusteeship Agreement that the Administering Authority *shall* promote the economic advancement and self-sufficiency of the inhabitants by encouraging the development of fisheries and by protecting the inhabitants against loss of their natural resources.[88]

The conclusion thus becomes inescapable that the geographic quarantine and the physical consequences of thermonuclear tests in the Pacific Proving Grounds are at variance with solemn treaty obligations of the United States under the U.N. Charter and the Trusteeship Agreement.

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85. See text at note 81 *supra*.

86. Accidents or near accidents are bound to occur because of "inadvertent trespass" into the warning areas whose enormous size makes it impossible to police them adequately. Statement of Admiral Strauss, 100 Cong. Rec. 4234 (daily ed. April 2, 1954). Furthermore, injuries such as those suffered by 236 Marshallese when "the wind failed to follow the predictions but shifted south," *ibid.*, are likely to recur, since wind direction and shifts can never be predicted with sufficient accuracy to insure the safety of inhabitants of the area.

87. "Land means a great deal to the Marshallese. It means more than just a place where you can plant your food crops and build your houses; or a place where you can bury your dead. It is the very life of the people. Take away their land and their spirits go also.... The Japanese had taken away the best portions of the following atolls; Jaluit, Kwajalein, Enewetak [*sic*], Mille, Maloelap and Wotje to be fortified as part of their preparation for the last war, World War II. So far, only Imedj Island on Jaluit Atoll has been returned to its former owners. For security reasons, Kwajalein Island is being kept for the military use. Bikini and Eniwetak [*sic*] were taken away for Atomic bomb tests and their inhabitants were moved to Kili Island and Ujelang Atoll respectively. Because Rongelab and Uterik are now radioactive, their inhabitants are being kept on Kwajalein for an indeterminate length of time." *Petition from the Marshallese People Concerning the Pacific Islands*, U.N. Doc. No. T/Pet.10/28 (1954).

88. The Bikini people offer a good case in point. On Bikini their primary occupation was fishing. They have since been removed to Kili Island where there is no fishing for seven months of the year when high surf makes it almost impossible to land on the island. Kili is now called "the island of hungry people." N.Y. Times, June 28, 1954, p. 3, col. 5.

CONCLUSION

"World order, in the long run, depends, not on men, but upon law, law which embodies eternal principles of justice and morality."

—John Foster Dulles[89]

The United States, as a leading state in the contemporary power struggle, has prided itself on its adherence to the fundamental principles and usages of international law. It has long been in the forefront of those world powers who insist on strict observance of treaty obligations. This cornerstone of American foreign policy has been a source of great strength and prestige for this country among the peoples of the world,[90] and, at the same time, an ideological springboard for attack against our competitors in the so-called war for men's minds. It seems clear that the United States cannot maintain this enviable position in the face of the facts surrounding its thermonuclear tests in the Pacific. Nor, so long as its own hands are unclean, can it hope to convince other governments and peoples of the sincerity of its concern over Soviet and Chinese violations of international law.

The United States has no present intention of halting the Pacific experiments,[91] although it has pledged itself to do everything possible to prevent further injuries or damage.[92] The primary official justification for continuing the tests appears to be the politico-military argument that "no one could reasonably contend that the Soviet should be the only nation to conduct nuclear experiments."[93]

It may be that the nature of the world struggle precludes the possibility of the discontinuation of thermonuclear experiments by the United States and the Soviet Union. Such a desirable state of things could perhaps be brought about only by means of a treaty barring the production of thermonuclear weapons with provisions for international supervision and other safeguards. But assuming that experiments will go on, this nation still confronts the task of carrying them out in a manner compatible with the basic general tenets of international law and with the specific provisions of the United Nations Charter and the Trusteeship Agreement.

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89. Dulles, *The Challenge of Our Time: Peace with Justice*, 39 A.B.A.J. 1063, 1066 (1953).

90. For a contrary view, see the attack by George Kennan on our "legalistic-moralistic approach to international problems." KENNAN, AMERICAN DIPLOMACY, 1900-1950 c. VI and *passim* (1951).

91. See statement of Admiral Strauss, N.Y. Times, Sept. 10, 1954, p. 1, col. 3. See also statements of Frank E. Midciff, U.S. High Commissioner of the Pacific Islands, and Mason Sears, U.S. Representative on the U.N. Trusteeship Council, N.Y. Times, July 8, 1954, p. 5, col. 1.

92. See, *e.g.*, statement by the United States Representative at the United Nations, Henry Cabot Lodge, concerning the Marshallese Petition on the thermonuclear tests. N.Y. Times, May 15, 1954, p. 10, cols. 5-6.

93. Statement of Mason Sears before the U.N. Trusteeship Council, N.Y. Times, July 8, 1954, p. 5, col. 1. When the Syrian Representative on the Trusteeship Council asked Mr. Sears how the nuclear tests could be reconciled with U.S. obligations under the U.N. Charter and the Trusteeship Agreement, Mr. Sears retorted (in somewhat un-

The conflicting demands of military preparedness and international law can be satisfied only by discontinuing the tests in the Pacific Proving Grounds, and by conducting them instead within the continental limits of the United States, or Alaska, or somewhere within the Arctic Region in the "sector"[94] north of Alaska, or—by agreement with the Canadian Government—in the Canadian "sector." Any one of these alternatives would remove most, if not all, of the legal objections to the United States' thermonuclear experiments as they are currently conducted.

Selecting a proving ground within continental United States unquestionably would be no small undertaking. It would necessitate evacuation of the population from exceedingly large areas—conceivably an entire state or group of states—or, in the case of Alaska, a great part or all of the vast territory. Nevertheless, it seems eminently reasonable and just that we, who are undertaking to produce a weapon of such destructive power, are the people who should make the sacrifices which may be necessary for perfecting it. We should be prepared to run the risks of injury to health and property ourselves. If we are not prepared to expose *ourselves* to these hazards, *a fortiori* we have no right to expose other peoples to them in order to protect our citizens. Both morals and logic dictate that the risk of thermonuclear tests should be borne by the state benefiting from them.[95]

The Arctic region offers the advantages of remoteness and lack of population. On the other hand, it may be (and on this point the writer can make no claim to knowledge) that the atmospheric and terrain conditions of the Arctic would make experiments impracticable.[96]

The conclusion remains clear: the laws of humanity suggest and the law of nations requires immediate cessation of the thermonuclear experiments in the Pacific Proving Grounds.

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diplomatic fashion): "This is a kind of silly question. The Syrian Representative knows exactly what is going on in the world today, and that we can't stop as long as the Russians don't." N.Y. Times, July 10, 1954, p. 5, col. 3.

94. "Sector" is the technical international law term referring to the not yet fully accepted juridical basis for claims to regions surrounding the North Pole. Under this principle, claims of sovereignty over Arctic territories are defined by the coastlines of states contiguous to the polar region, with meridians drawn northward from the extreme points of these coastlines to their apex at the Pole. Thus, Arctic "pie-sectors" have been claimed and occupied by the U.S.S.R., Canada, Denmark (through Greenland), Norway, and the United States (through Alaska). FENWICK, INTERNATIONAL LAW 354 (3d ed. 1948).

95. For a similar conclusion, prompted by scientific and moral considerations, see Arnold, *Effects of the Recent Bomb Tests on Human Beings*, 10 BULL. ATOM. SCIENTISTS 347, 348 (1954).

96. Reports from Japan have indicated that the U.S.S.R. has been conducting its own thermonuclear experiments on Wrangel Island in the Soviet Arctic sector. N.Y. Times, Sept. 23, 1954, p. 4, col. 3. There have been other reports of the use of Cape Chaplin in northeastern Siberia as a Soviet proving ground. N.Y. Times, Aug. 17, 1954, p. 16, col. 4. The United States has denied reports that the Antarctic was being explored by this country with a view toward its suitability for H-bomb experiments. N.Y. Times, Nov. 12, 1954, p. 8, col. 6.

Annex 512

I. Brownlie, *Principles of Public International Law* (Oxford, 5ed., 1998), pages 4-5

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least for those who care for such classification. Source (d), with its reference 'as subsidiary means for the determination of rules of law', relates to material sources. Yet some jurists regard (d), as a reference to formal sources, and Fitzmaurice has criticized the classification of judicial decisions as 'subsidiary means'.[6]

In general Article 38 does not rest upon a distinction between formal and material sources, and a system of priority of application depends simply on the order (a) to (d), and the reference to subsidiary means. Moreover, it is probably unwise to think in terms of hierarchy dictated by the order (a) to (d) in all cases.[7] Source (a) relates to *obligations* in any case; and presumably a treaty contrary to a custom or to a general principle part of the *jus cogens*[8] would be void or voidable. Again, the interpretation of a treaty may involve resort to general principles of law or of international law.[9] A treaty may be displaced or amended by a subsequent custom, where such effects are recognized by the subsequent conduct of the parties.[10]

3. *International Custom*[11]

Definition. Article 38 refers to 'international custom, as evidence of a general practice accepted as law', and Brierly[12] remarks that 'what is sought for is a general recognition among States of a certain practice as obligatory'. Although occasionally the terms are used interchangeably, 'custom' and 'usage' are terms of art and have different meanings. A usage is a general practice which does not reflect a legal

[6] *Symbolae Verzijl*, at p. 174.

[7] See Judge Moreno Quintana, *Right of Passage Case*, ICJ Reports (1960), 90.

[8] *Infra*, ch. XXIII, on *jus cogens* and its effects.

[9] See *infra*, pp. 15–19.

[10] *Air Transport Services Agreement Arbitration*, 1963, ILR 38, 182; *RIAA* xvi, 5; Award, Pt. IV, s. 5.

[11] See *supra*, n. 1, and see further: Lauterpacht, *The Development of International Law by the International Court* (1958), 368–93; Guggenheim, in *Études en l'honneur de Georges Scelle* (1950), i. 275–84; id., *Traité* i. 93–113; Suy, *Les Actes juridiques unilatéraux en droit international public* (1962), 215–67; Fitzmaurice, 27 *BY* (1950), 17–18; 30 *BY* (1953), 67–9; 35 *BY* (1959), 229–30; Skubiszewski, 31 *Z.a.ö.R.u.V.* (1971), 810–54; Verzijl, *International Law in Historical Perspective*, i (1968), 31–47; Thirlway, *International Customary Law and Codification* (1972); Barberis, *Neths. Int. LR* (1967), 367–81; Manin, 80 *RGDIP* (1976), 7–54; P. de Visscher, 136 Hague *Recueil* (1972, II), 61–77; Akehurst, 47 *BY* (1974–5), 1–53; Meijers, *Neths. Yrbk.* (1978), 3–26; Stern, *Mélanges Reuter* (1981), 479–99; Bos, *German Yrbk.*, 25 (1982), 9–53; Cheng, in Macdonald and Johnston (eds.) *The Structure and Process of International Law*, pp. 513–50; Virally, 183 Hague *Recueil*, (1983, V), 167–206; Jiménez de Aréchaga, in *Essays in Honour of Judge Manfred Lachs* (1984), 575–85; Abi-Saab, in *Études en l'honneur de Roberto Ago*, i. 53–65; Thirlway, 61 *BY* (1990), 31–110; Wolfke, *Custom in Present International Law*, 2nd edn. (1993); id., 24 *Neths. Yrbk.* (1993), 1–16.

[12] p. 61. See also Judge Read in the *Fisheries* case, ICJ Reports (1951), 191: 'Customary international law is the generalization of the practice of States.'

obligation,[13] and examples are ceremonial salutes at sea and the practice of exempting diplomatic vehicles from parking prohibitions.[14]

Evidence. The material sources of custom are very numerous and include the following:[15] diplomatic correspondence, policy statements, press releases, the opinions of official legal advisers, official manuals on legal questions, e.g. manuals of military law, executive decisions and practices, orders to naval forces etc., comments by governments on drafts produced by the International Law Commission, state legislation,[16] international and national judicial decisions,[17] recitals in treaties and other international instruments, a pattern of treaties in the same form, the practice of international organs,[18] and resolutions relating to legal questions in the United Nations General Assembly. Obviously the value of these sources varies and much depends on the circumstances.

The elements of custom

(*a*) *Duration.* Provided the consistency and generality of a practice are proved, no particular duration is required: the passage of time will of course be a part of the evidence of generality and consistency. A long (and, much less, an immemorial) practice is not necessary, and rules relating to airspace and the continental shelf have emerged from fairly quick maturing of practice. The International Court does not emphasize the time element as such in its practice.

(*b*) *Uniformity, consistency of the practice.* This is very much a matter of appreciation and a tribunal will have considerable freedom of determination in many cases. Complete uniformity is not required, but substantial uniformity is, and thus in the *Fisheries* case[19] the Court refused to accept the existence of a ten-mile rule for bays.[20]

[13] See further *infra*, pp. 7–9, on the *opinio juris*.

[14] See *Parking Privileges for Diplomats Case*, ILR 70, 396 (Fed. Admin. Ct., FRG).

[15] See in particular Parry, 44 *Grot. Soc.* (1958, 1959), 145–86; McNair, *Opinions*, i. Preface; Zemanek, *Festschrift für Rudolf Bernhardt* (1995), 289–306. Custom apart from the practice of *states* may be influential, e.g. in the general law of the sea; cf. the *Tolten* [1946] P. 135; *Ann. Digest* (1946), no. 42.

[16] Cf. the *Scotia* (1871) 14 Wallace 170.

[17] The latter provided a basis for the concept of the historic bay.

[18] In its Advisory Opinion in the *Genocide* case the ICJ refers to the practice of the Council of the League of Nations in the matter of reservations to multilateral conventions: ICJ Reports (1951), 25. See also the joint diss. op., ibid. 34 ff.

[19] ICJ Reports (1951), 116 at 131. See also the *Genocide* case, ibid. 25: 'In fact, the examples of objections made to reservations appear to be too rare in international practice to have given rise to such a rule.'

[20] See *infra*, pp. 180–4.

Annex 513

"Rules on International Groundwaters", Report of the Sixty-Second Conference, Seoul Conference Report, 1986, Committee on International Water Resources, *International Law Association*

International Law Association
Rules on International Groundwaters
Seoul, 1988

from
Report of the Sixty-Second Conference, Seoul Conference Report, 1986, Committee on International Water Resources, pp. 251-274

Article 1

The waters of international aquifers[1]

The waters of an aquifer that is intersected by the boundary between two or more States are international groundwaters and such an aquifer with its waters forms an international basin or part thereof. Those States are basin States within the meaning of the Helsinki Rules whether or not the aquifer and its waters form with surface waters part of a hydraulic system flowing into a common terminus.

Article 2

Hydraulic interdependence

1. An aquifer that contributes water to, or receives water from, surface waters of an international basin constitutes part of that international basin for the purposes of the Helsinki Rules.

2. An aquifer intersected by the boundary between two or more States that does not contribute water to, or receive water from, surface waters of an international drainage basin constitutes an international drainage basin for the purpose of the Helsinki Rules.

3. Basin States, in exercising their rights and performing their duties under international law, shall take into account any interdependence of the groundwater and other waters, including any interconnections between aquifers, and any leaching into aquifers caused by activities in areas under their jurisdiction.

Article 3

Protection of groundwater

1. Basin States shall prevent or abate the pollution of international groundwaters in accordance with international law applicable to existing, new, increased and highly dangerous pollution. Special consideration shall be given to the long-term effects of the pollution of groundwater.

[1] The term "aquifer" as here employed comprehends all underground water bearing strata capable of yielding water on practicable basis, whether these are in other instruments or contexts called by another name such as "groundwater reservoir", "groundwater catchment area", etc. including the waters in fissured or fractured rock formations and structures containing deep, so-called "fossil waters".

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2. Basin States shall consult and exchange relevant available information and data at the request of any one of them:

(a) for the purpose of preserving the groundwaters of the basin from degradation and protecting from impairment the geologic structure of the aquifers, including recharge areas;

(b) for the purpose of considering joint or parallel quality standards and environmental protection measures applicable to international groundwaters and their aquifers.

3. Basin States shall co-operate, at the request of any one of them, for the purpose of collecting and analyzing additional needed information and data pertinent to the international groundwaters or their aquifers.

Article 4

Groundwater management and surface waters

Basin States should consider the integrated management, including conjunctive use with surface waters, of their international groundwaters at the request of any one of them.

Provided by the International Water Law Project: www.waterlaw.org

Annex 514

S. Rosenne, *The Law and Practice of the International Court, 1920-2005* (Martinus Nijhoff Publishers, 4ed., 2006), pages 1550-1552

THE LAW AND PRACTICE OF THE INTERNATIONAL COURT, 1920–2005

VOLUME III
PROCEDURE

by

SHABTAI ROSENNE



MARTINUS NIJHOFF PUBLISHERS

no subordination, of positive law and the so-called natural law of nations (in the Grotian sense). The absence of subordination means that a rule of positive law cannot be invalidated by a general principle of law – although a general principle will have to give way to a positive rule because the positive rule, whether conventional or customary will be *lex specialis* in relation to the general principle. Thus, in the *Right of Passage* (Merits) case, after the Court had established the existence of a local custom binding upon the two States, it did not find it necessary to examine whether general international custom or the general principles of law might lead to the same result. Emphasizing that it was dealing with a case having special features, the Court went on to say:

> Historically the case goes back to a period when, and relates to a region in which, the relations between neighbouring States were not regulated by precisely formulated rules but were governed largely by practice. Where therefore the Court finds a practice clearly established between two States which was accepted by the Parties as governing the relations between them, the Court must attribute decisive effect to that practice for the purpose of determining their specific rights and obligations. Such a particular practice must prevail over any general rules.[100]

The practice of the Court does not, strictly speaking, support the assertion that the general principles of law have as such a subsidiary character. At most they will only appear to be subsidiary in relation to positive norms, whether conventional or customary, which, in the present state of international law, have priority.

III.377. Statute, Article 38, Paragraph 1 (*d*): Subsidiary Means – Generalities. Article 38, paragraph 1 (*d*), refers to two separate matters which are not on the same footing, namely judicial decisions and the teachings of the most highly qualified publicists. Both of these are denominated *subsidiary means for the determination of rules of law*. Heads (*a*), (*b*) and (*c*) describe the various types of rules, from the point of view of legal theory, of which together international law is

[100] [1960] 6, 44. For the opposite view see Judge Moreno Quintana who, on the basis that there existed a legal order of precedence in the application of the sources of

composed. Head (*d*) refers to an entirely different aspect, namely means for the determination of rules of law, that is rules falling into any one of heads (*a*), (*b*), and (*c*). In this context, the qualification *subsidiary* points to the auxiliary nature of head (*d*) in the sense that it is the storehouse from which the rules of heads (*a*), (*b*) and (*c*) can be extracted. Moreover, these two elements are not the direct creation of States. However, whatever the original intention of the draftsmen of the Statute of the Permanent Court, judicial decisions, in whatever form (judgments, advisory opinions, orders) of the International Court (including its chambers), and to less extent those of other tribunals international and national, assume a prominent place in the law and practice of the International Court in particular, and of all international tribunals in general.

Judicial decisions and the teachings of the most highly qualified publicists are not the only means, principal or subsidiary, for the determination of the rules of law. A more comprehensive catalogue can be given. Article 24 of the Statute of the International Law Commission required the Commission to consider ways and means for making the evidence of *customary* international law more readily available, 'such as the collection and publication of documents concerning State practice and of the decisions of national and international courts on questions of international law'. On the basis of preparatory work by the Secretary-General of the United Nations[101] and by Professor Hudson who prepared a working paper on the topic,[102] the Commission presented its report to the General Assembly.[103] In that report the Commission did not consider that the differentiation between conventional international law and customary international law ought to be rigidly insisted upon. It also thought that article 24 of its Statute 'seems to depart from the

[101] *Ways and Means of Making the Evidence of Customary International Law more readily Available* (doc. A/CN.4/6 and Corr.1. Sales No. 1949.V.6.).

[102] [1950-II] ILCYB (doc. A/CN.4/16 and Add. 1) 24.

[103] For the Commission's report, see [1950-II] ILCYB (doc. A/1316, Ch. II), in particular para. 30. For the discussion in the Commission's 40th meeting, see 1950-I ibid. 4. The subsequent debates in the fifth, sixth and seventh sessions of the General Assembly on this topic are instructive on the attitudes of States to this important question. Most of these recommendations of the ILC have since been implemented. The Commission stressed that it was dealing with the *evidence* of international law, not with its sources or the method of creation of the rules of law. On the difference between Art. 38 (1) (*d*) of the Statute of

classification in Article 38 of the Statute of the Court by including judicial decisions on questions of international law among the evidences of customary international law'. The Commission went on to state, however, that the departure may be defended logically, for 'such decisions, particularly those by international courts, may formulate and apply principles and rules of customary international law. Moreover, the practice of a State may be indicated by the decisions of its national courts'.

The Commission gave particulars of the evidence of customary international law defined in this way under the following heads: (*a*) texts of international instruments; (*b*) decisions of international courts; (*c*) decisions of national courts; (*d*) national legislation; (*e*) diplomatic correspondence; (*f*) opinions of national legal advisers (with reserve); (*g*) practice of international organizations.[104] To this list may now be added: (*h*) certain types of resolutions of United Nations organs and of the specialized agencies; (*i*) reports of the International Law Commission;[105] and (*k*) correspondence between the Registry and the parties and others included in the volumes of *Pleadings*. Perusal of the pleadings in the Permanent Court and the present Court shows that parties rely upon all these 'sources', which are also frequently invoked in individual opinions. The ILC's formulation, with the proposed additions, is more in accordance with current international practice than the brief text of Article 38, paragraph 1 (*d*). At the same time one must recognize that there is a serious problem of the availability and accessibility of the material listed by the ILC. The earlier collections of arbitral awards are virtually unobtainable today, as is much of other primary source material. On the other hand, the introduction of the Internet and the extensive use made by Governments of specially constructed websites is making accession to current materials easier.

III.377A. Statute, Article 38, Paragraph 1 (*d*): Judicial Decisions. By referring to Article 59 of the Statute (see § III.385), Article 38 contains an apparent limitation on the Court's freedom to employ judicial decisions as a subsidiary means for the determination of the rules of law. Nevertheless, earlier judicial and arbitral decisions are frequently used to identify or elucidate a rule of the law, not to make such

[104] However, notice, on this aspect, the significant views of Judge Sir Percy Spender

a rule, i.e. not so much in the quality of binding precedents as having persuasive influence. Thus we find the Court habitually referring to its own decisions and those of the Permanent Court.[106] The reference to Article 59 simply means that the legal consequences of a decision *qua* decision are limited to the parties and to that particular case. State practice, as evidenced for example in miscellaneous diplomatic correspondence and in pleadings before the Court and other international tribunals, follows this. While there is no formal hierarchy of international courts and tribunals, the pre-eminence of the Permanent Court and the present International Court is today generally accepted. Any other international adjudicatory body which ignored relevant dicta and decisions of the International Court would jeopardize its credibility. The constant accretion of judicial precedents is creating what is now a substantial body of international case law. The effect of this has been the incorporation of a sensible modification into the apparent rigidity of Article 38, paragraph 1 (*d*). Recognition of the value of the decisions of a permanent tribunal as a precedent is a natural one for all tribunals, and it can develop without any need for artificial doctrines of the binding force of precedents, or difficult theories of judicial legislation.

Reliance on previous decisions – particularly those of the International Court – is marked in ad hoc arbitration tribunals, but the organic permanence of the International Court and its status as the principal judicial organ of the United Nations have enabled this process to be followed with greater frequency. Yet it is premature to deduce any definite concepts, rules or principles governing their use. The Court has carefully avoided any statement which could indicate that it felt itself 'bound' by a previous decision – indeed, for it to do so would not be compatible with the opening words of paragraph 1 (*d*). Some of the citations are little more than a form of incorporation by reference of previous statements, a technical feature of judicial composition which lends itself to the elliptical phrasing so characteristic of contemporary

[106] See H. Lauterpacht, op. cit. in n. 15 above; M. Shahabuddeen, op. cit. in n. 101 above; R. Jennings, 'The Judiciary, International and National, and the Development of International Law', 102 ILR ix, also in 45 ICLQ 1 (1996). Judge Sir Arnold McNair has commented favourably on the practice adopted by litigants and the Court of citing previous decisions. He added that decisions of other international tribunals or of national courts 'may reasonably be supposed to have some persuasive authority'. *The Development of*

Annex 515

D. G. Partan, "The "Duty to Inform" in International Environmental Law", *Boston University International Law Journal,* 1988, pp. 43-88, pages 43-63

THE "DUTY TO INFORM" IN INTERNATIONAL ENVIRONMENTAL LAW

DANIEL G. PARTAN*

I. INTRODUCTION

In a period of less than 15 years, from the early 1970's to the mid-1980's, the "duty to inform" has advanced from a conference proposal to what some now see as a well-established principle of international law. While the speed with which this development has occurred is perhaps no longer extraordinary,[1] it does bear witness to the importance and, indeed, the urgency, attached to the principle by participants in the international law process. Speaking of the duty of the "source" or "acting" state to inform "affected" states of actual or potential transboundary harm, a recent authoritative formulation frames the duty in the following terms:

> When an activity taking place within its territory or control gives or may give rise to loss or injury to persons or things within the territory or control of another State, the acting State has a duty to provide the affected State with all relevant and available information, including a specific indication of the kinds and degrees of loss or injury that it considers to be foreseeable, and the remedial measures it proposes.[2]

The purpose of this paper is to describe the origin and development of the "duty to inform," to examine the international law status of that duty, and to explore its implications for firms engaged in potentially harmful transboundary activities. The initial focus will be on the articulation of state-to-state responsibilities in public international law. Underlying this focus, however,

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[1] Classical formulations of the customary international lawmaking process typically required an extended period of time during which consistent and uniform state practice gradually developed into binding law. Professor Brownlie observes that although the passage of time will help to prove the generality and consistency of a practice, today "no particular duration is required," and that international law rules are recognized as emerging from "fairly quick maturing of practice." BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 6 (3d ed. 1979). The elimination of the time factor in customary and other international lawmaking processes results in part from the new role played by international organizations in the international law development process. *See infra* Part V.

[2] Quentin-Baxter, *Third Report on International Liability for Dangerous Consequences Arising Out of Acts Not Prohibited by International Law, "Schematic Outline"* in [1982] 2 Y.B. INT'L L. COMM'N 51, 62. U.N. Doc. A/CN.4/Sec. A/1982/Add. 1 (Part 1) (1982) [hereinafter *ILC Schematic Outline*].

is the recognition that ultimate liability for the harmful consequences of private transboundary activities commonly is and ought to be visited upon the private interests involved. As will be seen, public international law principles affect the responsible firm's liability in two ways. First, international law duties will likely stimulate governments to enact national laws bearing upon the private firm's liability. Second, international law will on occasion provide domestic courts with legal standards that may be "adopted" by the court as national law and applied to damage claims brought against private firms. The discussion of the international law "duty to inform" in this paper is therefore important to an evaluation of the damage judgment exposure of the responsible firm: International law duties borne by governments will inevitably form a basis for the damage liability of the responsible firm.

II. DEVELOPING THE "DUTY TO INFORM"

A. *The Stockholm Conference*

The "duty to inform" idea appeared in proposals made in the early 1970's for what became the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm (the Stockholm Declaration) in 1972.[3] Principle 21 of the Stockholm Declaration affirmed that: "States have . . . the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States."[4]

Principle 21 was originally accompanied by a proposed "Principle 20" that would have affirmed a duty to inform of transboundary risks. Principle 20 would have provided:

> Relevant information must be supplied by States on activities or developments within their jurisdiction or under their control whenever they believe, or have reason to believe, that such information is needed to avoid the risk of significant adverse effects on the environment in areas beyond their national jurisdiction.[5]

The origin and ultimate disposition of the draft principle just quoted offer a good illustration of the multilateral process by which the work of U.N. agencies helps to develop international environmental law.

The proposed duty to inform originated at Stockholm as the broader idea

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[3] Report of the U.N. Conference on the Human Environment, U.N. Doc. A/CONF. 48/14 (1972), *reprinted in* 11 I.L.M. 1416 (1972) [hereinafter Stockholm Declaration]. *See* Sohn, *The Stockholm Declaration on the Human Environment*, 14 HARV. INT'L L.J. 423, 496-502 (1973).

[4] Stockholm Declaration, *supra* note 3, at 485.

[5] U.N. Doc. A/CONF.48/4, Annex, para. 20, at 4 (1972), *quoted in* Sohn, *supra* note 3, at 496.

of a duty of "acting" states to consult with affected states before the "source" or "acting" state undertakes activities that may damage the environment of affected states.[6] The duty to consult was supported by some states as a duty inherent in the obligations of all states under the United Nations Charter. This presumably referred to the obligation under Article 33 of the U.N. Charter to have resort to negotiation among other peaceful means for the settlement of disputes. However, the duty to consult was opposed by other states as in fact exceeding current legal requirements.[7]

In view of the controversy over the proposal to include a duty to consult in the Stockholm Declaration, some states proposed scaling the duty to consult down to a duty to inform, which was eventually formulated in the above-quoted draft Principle 20.[8] Even that draft, however, continued to meet with opposition. Brazil proposed to limit the duty to inform by adding the proviso that "no State is obliged to supply information under conditions that, in its founded judgment, may jeopardize its national security, economic development or its national efforts to improve [the] environment."[9]

The Brazilian objection was rooted in a then-current dispute between Brazil and Argentina concerning Brazilian plans to build a hydroelectric facility utilizing the waters of a river that eventually flowed into Argentina. Fearing adverse environmental effects from the Brazilian proposal, Argentina called upon Brazil to consult with Argentina prior to building the facility. Argentina pressed its demand at Stockholm by supporting the proposed duty to consult and by proposing a more particularized version of the duty to inform.[10]

In deference to the objections to the duty to consult and to the several

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[6] *See* Sohn, *supra* note 3, at 496-97. The terms "acting state" and "affected state" were not used at Stockholm; these terms are taken from the *ILC Schematic Outline*, *supra* note 2. The term "source state" has since replaced "acting state" in ILC reports.

[7] Some states that supported the duty to consult opposed its inclusion in the Declaration on the ground that, since the duty was inherent in the U.N. Charter, it would be redundant to restate that duty in the Stockholm Declaration. *See* Sohn, *supra* note 3, at 497-98.

[8] The Netherlands proposed that Principle 20 provide: "States shall inform other States directly concerned . . . on any envisaged activity which may cause damage to the environment of those States . . .; in appropriate cases States shall enter into international consultations." U.N. Doc. A/CONF. 48/PC/WG.1(II)/CRP.5, at 5 (1972), *quoted in* Sohn, *supra* note 3, at 498.

[9] U.N. Doc. A/CONF.48/14, at 119 (1972), *quoted in* Sohn, *supra* note 3, at 499.

[10] *See* SCHNEIDER, WORLD PUBLIC ORDER OF THE ENVIRONMENT: TOWARDS AN INTERNATIONAL ECOLOGICAL LAW AND ORGANIZATION 159 (1979). Argentina sought to have the Declaration require disclosure of such data as would enable affected states to "judge by themselves . . . the nature and probable effects" of the activities of the acting state. U.N. Doc. A/CONF.48/CRP.5 (1972), *quoted in* Sohn, *supra* note 3, at 499.

formulations of the duty to inform, and to avoid compromising the ongoing dispute between Argentina and Brazil, the Stockholm Conference decided to omit the controverted "Principle 20" from the Stockholm Declaration. Both sets of proposals were referred to the General Assembly.[11]

The legal status of the duty to inform as it emerged from the Stockholm Conference is thus far from clear. It seems a fair inference from events at the conference that no consensus could be achieved on a duty to consult. What the initial proposal framed as a duty of the source state to consult with affected states was transformed by the Stockholm Conference Preparatory Committee into a duty to inform.[12] The latter proposal could not be adopted for a combination of reasons. Four principal factors seem to have played a part.[13] First, the duty to inform was seen by some states as a pale and inadequate substitute for the asserted duty to consult. Second, from the opposite view, a duty to inform might implicate important state security and economic interests, which some states considered ought not to be subjected to such a duty without appropriate safeguards. Third, since experience with the asserted duty to inform had been minimal at best, some states felt it would be dangerous as well as inaccurate to articulate such a duty as an existing international law standard. Finally, and again from the opposite point of view, the duty to inform was seen by some states as merely an extrapolation from the generally accepted standard of Principle 21 that obligated states to ensure that activities within their jurisdiction or control do not cause damage in other states. In this latter view, the failure of the Stockholm Conference to adopt draft Principle 20 is attributable either to the redundancy of that proposed principle or to its unfortunate linkage with the dispute then existing between Argentina and Brazil.

In view of the divergent reasons offered for opposing draft Principle 20, it cannot be said that the duty to inform enjoyed sufficient support at the Stockholm Conference to be recognized as a principle of international law. Some states were satisfied that a duty to inform was fairly derived from existing legal obligations; others viewed the duty to inform as introducing new obligations. Since Principle 20 was not supported by a consensus, the duty to inform could not be said to reflect existing international law. Accordingly, draft Principle 20 was not included in the Stockholm Declaration.

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[11] The hope was that "a consensus would emerge by the time the General Assembly discussed" Principle 20. Sohn, *supra* note 3, at 499 (citing a statement by the representative of Zambia).

[12] *See* U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP. 3/Rev. 3, at 4 (1972) (proposal by Brazil, Egypt, and Yugoslavia), *quoted in* Sohn, *supra* note 3, at 498.

[13] *See* the Report of the Preparatory Committee, U.N. Doc. A/CONF.48/PC.12, Annexes I & II (1971), *discussed in* Sohn, *supra* note 3, at 497-99.

B. *The General Assembly's Response to Stockholm*

The ensuing 1972 session of the General Assembly provided a more concrete legal basis for the duty to inform. A proposal made by Brazil and endorsed by Argentina (the 1972 Assembly Resolution) introduced the duty to inform, albeit in a somewhat limited context. The proposal was ultimately adopted by the General Assembly without opposition.[14]

The 1972 Assembly resolution coupled two ideas. First, the resolution "recognizes" that Stockholm Principle 21 "will be effectively achieved if official and public knowledge is provided of the technical data relating to the work to be carried out" by the acting state "with a view to avoiding significant harm that may occur in the human environment of an adjacent area."[15] This somewhat convoluted statement seems to imply that a duty to inform is derived from the Principle 21 obligation to ensure that activities within a state's jurisdiction do not damage the environment of other states. Although the resolution contains several limiting clauses, it need not be read as suggesting that the duty is necessarily limited to providing "technical data" to avoid "significant harm" in "an adjacent area." In other words, advocates of the duty to inform can maintain that the resolution affirms that duty for at least part of its field of operation.

The second idea contained in the 1972 Assembly resolution "recognizes" that technical data "will be given and received in the best spirit of cooperation and good neighborliness" without enabling the affected state to "delay or impede" the source state's development of its natural resources.[16] In other words, the duty to inform was not to be used by the affected state as a means of defeating a development project.

The Brazilian proposal drew criticism from those who read into the proposal a weakening of the obligations affirmed in Stockholm Principle 21.[17] Such criticisms were withdrawn when it was made clear through a companion resolution that nothing in the Brazilian proposal "can affect" Principle 21.[18] This meant in particular that the responsibilities affirmed in Principle 21

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[14] 27 U.N. GAOR Annex (Agenda Item 47) at 2, U.N. Doc. A/8901 (1972), *quoted in* Sohn, *supra* note 3, at 499-500. The Brazilian proposal became General Assembly Resolution 2995 (XXVII) (1972). The vote was 115 to none, with 10 abstentions.

[15] U.N. Doc. A/8901, *supra* note 14, at 2.

[16] *Id.* at 2-3.

[17] The Canadian representative stated that the Brazilian draft "appeared to imply that all that was required . . . was the provision of information on activities which might have a harmful effect on other States. . . . [Principle 21 involved] also the responsibility not to damage others in the course of exploitation activities." U.N. Doc. A/C.2/SR.1469, at 14 (prov. ed. 1972), *quoted in* Sohn, *supra* note 3, at 500-01.

[18] General Assembly Resolution 2996 (XXVII) (1972). The vote was 111 to none, with 11 abstentions. U.N. Doc. A/C.2/SR.1479, at 7-8 (prov. ed. 1972). The final texts of the two resolutions may be found in U.N. Docs. A/RES./2995 and A/RES./2996 (1973), *quoted in* Sohn, *supra* note 3, at 502.

could not be satisfied by merely informing neighboring countries of proposed projects that might threaten transboundary harm. The delegate of Mexico urged a broad interpretation of Principle 21, asserting that the principle meant that all states had the responsibility "to avoid activities within their jurisdiction or control which might cause damage to the environment beyond their national frontiers and to repair any damage caused."[19]

General Assembly consideration of the issues referred by the Stockholm Conference can be interpreted as at least in part supporting the existence of a legal duty to inform. Even though the duty is stated in a less comprehensive and more guarded fashion than appeared in the original Stockholm draft,[20] the 1972 Assembly resolution indirectly affirms that international law requires the source state to inform affected states of transboundary risks. The two major limitations contained in the Assembly resolution do not diminish the resolution's affirmation of the duty to inform. First, the limitation to "significant harm" reflects the unresolved issue of the threshold for state liability for environmental damage.[21] Second, the reference to harm in an "adjacent area" reflects the specifics of the Argentina-Brazil controversy.[22] Neither limitation impairs the central idea that the source state has a duty to inform affected states of transboundary risks. Finally, whatever legal effect the Assembly resolution may have, the resolution does not compromise arguments that support a duty to Principle 21.

The difficulty with the 1972 Assembly resolution, however, is that it fails to affirm the duty to inform in a clear and straightforward manner. The resolution in fact affirms only that Stockholm Principle 21 will be "effectively achieved" if information is provided; it does not assert that either international law or Principle 21 *requires* that such information be provided. In other words, the international law duty affirmed in Principle 21 might be satisfied by means other than the provision of the information contemplated in the 1972 Assembly resolution. In view of the controversy surrounding draft Principle 20 at Stockholm, it is therefore difficult to read the 1972 Assembly resolution as expressing a consensus that a duty to inform exists in international environmental law.

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[19] U.N. Doc. A/C.2/SR.1470, at 19 (1972), *quoted in* Sohn, *supra* note 3, at 501. The Mexican delegate referred both to Principle 21 and to Principle 22, which recognizes the obligation of states to cooperate to develop "the international law regarding liability and compensation for the victims of pollution." Sohn, *supra* note 3, at 493.

[20] The original formulation of the duty to inform in draft Principle 20 is quoted, *supra,* in text accompanying note 5.

[21] The resolution's reference to "significant harm" reflects the idea that states are liable for transboundary pollution only when significant or substantial harm is found to have been the result. *See* Oppenheim, *International Law,* in 1 PEACE 291 (H. Lauterpacht ed. 1955), where the state's duty is said to be to prevent uses of its territory that are "unduly injurious" to the inhabitants of neighboring states.

[22] The resolution's reference to harm to an "adjacent area" directly reflects the facts of the Argentina-Brazil dispute.

The following year the General Assembly addressed the duty to inform in more comprehensive terms. A General Assembly resolution concerning the "harmonious exploitation of natural resources common to two or more States" asserted that the sharing of such resources "must be developed on the basis of a system of information and prior consultation within the framework of the normal relations" existing between such states.[23] The support in this resolution for both "information and prior consultation" is straight forward and clear, but that support was unfortunately undercut by a lack of consensus.

The 1973 resolution was adopted chiefly by the votes of developing countries; some developing countries were opposed and a wide range of developed, developing, and socialist states abstained.[24] Opposition centered on the prior consultation duty, which Brazil among others continued to oppose. Abstentions resulted chiefly from a dispute as to the proper role of the U.N. Environment Programme, a concern shared by East and West, albeit from different perspectives. Thus, although there is support in the 1973 resolution both for prior consultation and for the duty to inform, it is difficult to count the resolution as effective precedent for either idea.

Considering that there had been no explicit opposition to the inclusion of a duty to inform in the 1972 resolution, however, the lack of consensus on the 1973 resolution should not be understood as expressing disapproval of the duty to inform. Indeed, since the negative votes and the abstentions in 1973 were explained on other grounds, the vote on the 1973 resolution could be construed as in effect an endorsement of the duty to inform affected states of transboundary risks.[25]

Together with its immediate aftermath in the two General Assembly resolutions, the record of the Stockholm Conference thus lends at least modest support to the existence of a duty to inform of transboundary risks in international environmental law. Even though draft Principle 20 was withdrawn and the duty to inform does not appear in the Stockholm Declaration, the negotiating record does not clearly suggest that withdrawal resulted from the rejection by states of a duty to inform. Therefore, if the law had already established a duty to inform independent of the Stockholm Conference, the record at Stockholm and in the General Assembly does not negate that duty. What is missing, however, is an affirmation either at Stockholm or in the General Assembly that the duty to inform is an international law obligation,

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[23] G.A. Res. 3129, 27 U.N. GAOR Annex (Agenda Item 50) at 6, U.N. Doc. A/9402 (1973), adopted by a vote of 77 to 5, with 43 abstentions.

[24] *Id.* at 5.

[25] Sohn concludes that through the 1972 Assembly resolution, the duty to inform had become "for all practical purposes . . . Principle 22A," neatly balancing "the desire of some states to be informed . . . with the firm conviction of other states that such information should not be used by a state to delay or impede the development of natural resources in another state." Sohn, *supra* note 3, at 502.

and a showing that in their actual practice states accept and carry out such a duty. Both elements are required in the classical view of customary international law. In classical theory, the asserted norm must be established by uniform and consistent state practice engaged in out of a sense of obligation that observance of such a norm is required by international law.[26]

III. Codifying the Duty to Inform of Transboundary Risks

Of the two elements needed in the theory of classical customary law to establish the duty to inform as an international legal duty, that is, state practice and the sense of obligation, state practice may be the more abundant. Codification efforts undertaken by the International Law Association in the decade following the Stockholm Conference disclose considerable state practice tending to support a general international law duty to inform of transboundary risks. Whether any of that state practice shows the requisite "sense of obligation" is more problematical. Both the relevant state practice and the "sense of obligation" are addressed in this section.

A. *Montreal Rules of Transfrontier Pollution*

The International Law Association (ILA), a non-governmental international association of experts on international law, considered and adopted "Rules of International Law Applicable to Transfrontier Pollution" at its 60th Conference, held at Montreal in 1982.[27] The Montreal Transfrontier Pollution Rules contain a "prior notice" provision as follows:

> States planning to carry out activities which might entail a significant risk of transfrontier pollution shall give early notice to States likely to be affected. In particular, they shall, on their own initiative or upon request of the potentially affected States, communicate such pertinent information as will permit the recipient to make an assessment of the probable effects of the planned activities.[28]

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[26] The classical view of customary international law is stated by the International Court in the *North Sea Continental Shelf Cases* as requiring state practice that is "both extensive and virtually uniform . . . and should moreover have occurred in such a way as to show a general recognition that a rule of law or legal obligation is involved." 1969 I.C.J. Reports 4, at para. 74. *See infra* Part V for a discussion of other approaches to establishing that the duty to inform is required by international law.

[27] International Law Association, Report of the Sixtieth Conference held at Montreal, 1-3, 157-77 (1983) [hereinafter ILA Montreal Transfrontier Pollution Rules].

[28] *Id.* art. 7(1), at 171. Article 7(2) provides that states "should" make an environmental assessment "to appraise whether a planned activity implies a significant risk of transfrontier pollution." *Id.* art. 7(2), at 171.

The quoted provision plainly affirms a mandatory duty to inform. It was based in part upon a number of instances that occurred in Western Europe in which proposals for the construction of hazardous installations in border areas were disclosed to authorities in neighboring states. Seven cases are cited. Three of these appear to have occurred within the framework of existing treaty-based bilateral commissions, including commissions for the security of nuclear installations located near borders; the other four occurred without reference to any treaty arrangement.[29] As evidence that the duty to inform is mandatory, the ILA report also cites other treaty commitments to furnish prior notice of potentially harmful projects, including boundary waters treaties,[30] the 1978 U.S.-Canadian Agreement on Great Lakes Water Quality,[31] and the 1974 Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden.[32] Finally, the ILA report refers to three statements by international organizations: (1) the Stockholm and General Assembly developments reviewed above;[33] (2) "Draft Principles of Conduct" adopted by the United Nations Environment Programme (UNEP), discussed below; and (3) an Organization for Economic Cooperation and Development (OECD) recommendation that provides for the transmission of risk information in the case of proposals creating transboundary risks. The OECD resolution is hortatory, providing that "[t]he Country of origin, on its own initiative or at the request of an exposed Country, should communicate to the latter appropriate information concerning it in matters of transfrontier pollution or significant risk of such pollution and enter into consultations with it."[34]

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[29] *Id.* art. 7(2), at 172-73.

[30] Boundary waters agreements frequently provide for advance notification and exchange of information concerning the use of waters in frontier regions, including the construction of any works likely to affect such waters. The ILA report cites the 1960 treaty between the Netherlands and the Federal Republic of Germany concerning Boundary Waters, 508 U.N.T.S. 26. *See also* the 1948 agreement between the Soviet Union and Poland, 37 U.N.T.S. 25, which calls for the exchange of information "concerning the level and volume of water and ice conditions on frontier waters."

[31] 30 U.S.T. 1383, T.I.A.S. No. 9257.

[32] 13 I.L.M. 591 (1974). The Convention deals largely with private rights of action for environmental damage, but also provides in Article 4 for the establishment of a "supervisory authority" in each contracting state, which authority shall have the right to challenge environmentally harmful activities before the courts or administrative authorities of the other contracting states. Article 6 provides that the supervising authority shall have the right to require applicants for permits "to submit such additional particulars, drawings and technical specifications as the examining authority deems necessary for evaluating the effects in the other State."

[33] *See supra* Part II.

[34] OECD Council Recommendation C(77) 28 (Final), Title C, para. 8(a) (1977), 16 I.L.M. 977, 982 (1977). The recommendation addresses access to national courts and

The United Nations Environment Programme's "Draft Principles of Conduct" address "the conservation and harmonious utilization of natural resources shared by two or more States."[35] The UNEP draft principles reiterate Stockholm Principle 21's statement of the legal responsibility of States to ensure that activities within their jurisdiction do not damage the environment of other States.[36] The principles go on to provide that:

> It is necessary for every State sharing a natural resource with one or more other States:
> (a) to notify in advance the other State or States of the pertinent details of plans to initiate, or make a change in, the conservation or utilization of the resource which can reasonably be expected to affect significantly the environment in the territory of the other State or States.[37]

The UNEP draft principle just quoted appears to incorporate failed Stockholm "Principle 20" in peremptory terms. Indeed, the ILA transfrontier pollution report cites the UNEP draft principle's "it is necessary" provision as affirming the duty to inform in "mandatory language."[38] Unfortunately, however, an "Explanatory Note" attached to the UNEP draft principles states that the drafters attempted "to avoid language which might create the impression of intending to refer to . . . a specific legal obligation under international law . . . ."[39] The Explanatory Note continues:

> The language used throughout does not seek to prejudice whether or to what extent the conduct envisaged in the principles is already prescribed by existing rules of general international law. Neither does the formulation intend to express an opinion as to whether or to what extent and in what manner the principles—as far as they do not reflect already existing rules of general international law—should be incorporated in the body of general international law.[40]

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administrative agencies in cases of transfrontier pollution. An earlier OECD Council recommendation concerning "Principles of Transfrontier Pollution" provided as follows: "Prior to the initiation in a country of works or undertakings which might create a significant risk of transfront' r pollution, this country should provide early information to other countries which are or may be affected." OECD Council Recommendation C(74) 224 (1974), 14 I.L.M. 242, 246 (1975).

[35] Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States. The draft principles were adopted by the UNEP Governing Council for transmission to the General Assembly. UNEP, Governing Council Decision 6/14 (1978), 33 GAOR, Supp. (No. 25), Annex I (A/33/25) (1978), *reprinted in*, 17 I.L.M. 1091, 1097-99 (1978) (draft) (hereinafter UNEP Draft Principles).

[36] *Id.* principle 3, para. 1, at 1098.

[37] *Id.* principle 3, para. 1, at 1099.

[38] *See* ILA MONTREAL TRANSFRONTIER POLLUTION RULES, *supra* note 27, para. 5, at 172.

[39] UNEP Draft Principles, *supra* note 35, at 1097, 1098 (Explanatory Note).

[40] *Id.* at 1098.

The UNEP draft principles therefore intended to leave untouched the question whether any of the principles restated international law. Indeed, when the draft principles were later endorsed by the General Assembly, the Assembly made explicit reference to the explanatory note and also conditioned its endorsement of the UNEP principles as being "without prejudice to the binding nature of those rules already recognized as such in international law . . . ."[41] The Assembly requested states to "use the principles as guidelines . . . in the formulation of bilateral or multilateral conventions regarding natural resources shared by two or more States . . . ."[42] The full legislative history of the UNEP draft principles thus negates their possible status as recommendations intended to affirm or reflect international law.

The evidence of state practice relied upon in the ILA report thus falls into three categories: (1) treaties, both bilateral and multilateral, requiring an acting state to inform affected states of the transboundary harm that might result from activities proposed or carried on within the territory of the acting state; (2) resolutions of international organizations recognizing or affirming the duty to inform; and (3) cases drawn from state practice in which an acting state has voluntarily transmitted risk information to an affected state either prior to or in response to a request that such information be supplied.

The treaty evidence cited in the ILA report could be multiplied several fold; by the time of the ILA report, a duty to inform, or to exchange information on environmental risks, had been included in many more treaties than were cited in the ILA report.[43] The difficulty with citing treaties as evidence of general international law obligations, however, is that the treaty creates its own obligation (*pacta sunt servanda*), and most often it is not known whether the parties intended by their treaty to create a new obligation or merely to incorporate an obligation that they viewed as already in existence in general international law. As the International Court has written, treaty parties acting to apply a treaty rule are presumably acting pursuant to the treaty: "From their action no inference could legitimately be drawn as to the existence of [the treaty rule as] a rule of customary international law . . ."[44] Thus, the fact that in their treaty relations many states have accepted a duty to inform potentially affected states of environmental risks created by activities within the acting state's jurisdiction does not by itself prove that such an obligation has passed into customary international

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[41] 37 G.A. Res. 186, 34 U.N. GAOR (107th mtg.), para. 2 (1979), *reprinted in* XVIII UNITED NATIONS RESOLUTION 316 (D. Djonovich ed. 1979-80). The resolution was adopted without a vote.

[42] *Id.* at para. 3.

[43] *See, e.g.*, the early boundary water treaties discussed in the U.N. Secretariat's "Survey of State Practice Relevant to International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law," U.N. Doc. A/CN.4/384, at 38-44, 56-61 (1984) (hereinafter "U.N. Secretariat Survey").

[44] *North Sea Continental Shelf Cases, supra* note 26, at para. 76.

law. More must be shown. Specifically, states must be shown to have accepted the treaty rule as in fact expressing an existing legal obligation.[45] While in some cases it is possible to find such evidence in treaty negotiations,[46] there seems no indication in the treaties cited in the ILA report that the parties to those treaties "uniformly and consistently" regarded the duty to inform as a duty then existing in customary international law.

Much the same theoretical problem exists with the state practice cases cited in the ILA report. There is no indication in the report that the states involved in the four cases in which information had been supplied without legal compulsion by preexisting treaty obligation had regarded the duty to inform as established in international law. To again apply the language of the International Court, "the basis of their action can only be problematical and must remain entirely speculative."[47] There is therefore no justifiable inference that such states "believed themselves to be applying a mandatory rule of customary international law."[48]

States that voluntarily furnish environmental impact information may have many reasons for doing so. If it cannot be shown that recognized compulsion of law was at least one of those reasons, no inference can be drawn that the acting state has, by its conduct, recognized an international law duty to inform. To supply the *opinio juris* classically required for customary international law, the acts relied upon must "be such, or be carried out in such a way, as to be evidence of a belief that this practice is rendered obligatory by the existence of a rule requiring it."[49]

Finally, the reliance in the ILA report on international organization statements seems insufficient to establish the international law stature of the duty to inform. The Stockholm experience coupled with the later General Assem-

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[45] In an excellent study of "Multilateral Treaties as Evidence of Customary International Law," the late Richard Baxter concluded that a treaty constitutive of new law must subsequently be "accepted into custom, either by express reference to this process by States and other authorities or by proof that the rule of the treaty is identical with customary law. . . ." Baxter, *Multilateral Treaties as Evidence of Customary International Law,* 41 BRIT. Y.B. INT'L L. 275, 299 (1965-66). This conception of the role of treaties has been criticized by Professor D'Amato in D'AMATO, THE CONCEPT OF CUSTOM IN INTERNATIONAL LAW, ch. 5, at 103-66 (1971). *See infra* Part V.

[46] A classical example is the 1958 Geneva Convention on the High Seas, which states in its Preamble that the provisions of the convention are "generally declaratory of established principles of international law . . . ." 13 U.S.T. 2312, 450 U.N.T.S. 82.

[47] *North Sea Continental Shelf Cases, supra* note 26, at para. 76.

[48] *Id.*

[49] *Id.* at para. 77. The drafters of the ILA report recognized the need for *opinio juris,* and asserted that it had been fulfilled, but failed to indicate what state practice had supplied evidence of the needed "sense of obligation." *See* ILA MONTREAL TRANSFRONTIER POLLUTION RULES, *supra* note 27, para. 10, at 173.

bly resolutions does give some support for the asserted duty to inform, but, as has been observed, that support is less than conclusive.[50] The OECD recommendation[51] does not formulate a binding "duty;" it casts the "duty" in wholly precatory terms, which, if anything, undercuts the Stockholm precedent.

The UNEP draft principles are also not of assistance in showing the binding nature of a duty to inform. As has been shown,[52] although an obligatory character was not necessarily excluded, the UNEP draft principles were not intended to state international law duties. Indeed, the General Assembly seemed in the end to regard the UNEP draft principles, including the duty to inform, as principles to be considered by states in negotiating international agreements on the subject. In its operative paragraph, the Assembly resolution "requests" states to use the UNEP principles "as guidelines and recommendations in the formulation of bilateral or multilateral conventions regarding natural resources . . . on the basis of the principle of good faith and in the spirit of good neighborliness, and in such a way as to enhance and not to affect adversely development."[53] The principles of "good faith" and "good neighborliness" may have obligatory content, but the UNEP principles were regarded as recommendatory.

B. *Codifying the International Law of Water and Air Pollution*

In the same year in which it adopted the Montreal Rules on Transfrontier Pollution, the International Law Association considered and approved Rules on Water Pollution in an International Drainage Basin.[54] The Montreal Water Pollution Rules provide a duty to inform that is framed in the following peremptory language:

> Basin states shall:
> (a) inform the other states concerned regularly of all relevant and reasonably available data, both qualitative and quantitative, on the pollution of waters of the basin, its causes, its nature, the damage resulting from it, and the preventive procedures;
> (b) notify the other states concerned in due time of any activities envisaged in their own territories that may involve a significant threat of, or increase in, water pollution in the territories of those other states; and
> (c) promptly inform states that might be affected, of any sudden change of circumstances that may cause or increase water pollution in the territories of those other states.[55]

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[50] *See supra* Part II.

[51] The OECD recommendation is quoted *supra* in text accompanying note 34.

[52] *See supra* notes 35-42 and accompanying text.

[53] 37 G.A. Res. 186, *supra* note 41, at para. 3.

[54] INTERNATIONAL LAW ASSOCIATION, REPORT OF THE SIXTIETH CONFERENCE 13, 531-48 (Montreal 1982) (hereinafter MONTREAL WATER POLLUTION RULES).

[55] *Id.* art. 5, at 540.

The far-reaching duty to inform contained in the Montreal Water Pollution Rules was justified as necessary for the "orderly development and utilization of international water resources."[56] The ILA report states:

> Without full and accurate information about the physical aspects of a drainage basin and about proposed works and utilizations affecting the waters of the basin, the states concerned will be unable, even with the best intentions and goodwill, to pursue rational policies and reach appropriate decisions about the development of the basin.[57]

Support for the mandatory character of the duty to inform was marshalled through citation to bilateral treaties, to recommendations of international organizations affirming the need for cooperation in water resources law,[58] and to the Stockholm, UNEP, and General Assembly developments discussed above. The ILA report acknowledged that the Stockholm Conference "rejected the attempt to make it obligatory for a state to give information to other states about its activity that might be harmful" to the affected states,[59] but viewed the later General Assembly and UNEP developments as having endorsed a mandatory rule requiring the exchange of information. No attention was given to a showing of "sense of obligation" in state practice, or to the factors, reviewed in the previous sections, that undercut the mandatory character of the asserted rule.[60]

In 1984 the International Law Association considered a preliminary report and draft articles on Long-Distance Air Pollution.[61] The draft articles contain a broad duty to inform that "States shall provide the other States concerned regularly with all relevant and reasonably available data on long-distance transfrontier air pollution."[62] The Paris Draft Air Pollution Articles also provide that "States planning to carry out activities which may entail a

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[56] *Id.* comment, para. 1, at 540.

[57] *Id.*

[58] *Id.* comment, para. 2, at 540. The report cites Bourne, *Procedure in the Development of International Drainage Basins*, 22 U. TORONTO L.J. 172, 191-206 (1976).

[59] *Id.* comment, para. 4, at 540-41.

[60] *Id.* The ILA report also cites a resolution concerning the exchange of information between hydrographic basin states adopted by the Institute of International Law at Athens in 1979. The duty to inform stated in the Athens resolution is qualified by the words "as far as practicable," which the ILA report viewed as "desirable" and as already reflected in the Montreal Water Pollution Rules by the reference to "relevant and reasonably available" data. *Id.* comment, para. 5, at 541. Neither formulation makes clear who judges whether the provision of specific information is "practicable" or whether the information is "relevant and reasonably available."

[61] INTERNATIONAL LAW ASSOCIATION, REPORT OF THE SIXTY-FIRST CONFERENCE, 377-413 (Paris 1984) (hereinafter PARIS DRAFT AIR POLLUTION ARTICLES).

[62] *Id.* art. 5, at 404. The article specifies that such data includes data relating to "the nature and quantity of air pollutants" and to harmful effects attributable to long-distance transfrontier air pollution. *Id.*

significant risk of, or increase in, long-distance transfrontier air pollution shall give early notice to the other States concerned."[63]

The ILA preliminary air pollution report relies on the Montreal Rules on Transfrontier Pollution and the Montreal Water Pollution Rules as support for the mandatory character of the duty to inform of transfrontier air pollution risks.[64] The report also relies upon the exchange of information requirements contained in the Convention on Long-Range Transboundary Air Pollution adopted by the Economic Commission for Europe (ECE) in 1979.[65] The ECE Convention contains a detailed exchange of information provision that obligates the parties to "exchange available information" both through the ECE and bilaterally, "in their common interests."[66] Such information includes information on emissions of agreed air pollutants, "or on the fluxes of agreed air pollutants . . . across national borders," and on "major changes in national policies and in general industrial development, and their potential impact, which would be likely to cause significant change in long-range transboundary air pollution."[67]

To the extent that the ILA preliminary report on Long-Distance Air Pollution relies on the earlier ILA reports discussed above, the asserted legal duty to inform of transboundary air pollution suffers from the same lack of clarity and inadequate showing of a sense of obligation in prior state practice that has already been discussed. To the extent that the report relies in addition on exchange of information provisions contained in treaties relating specifically to air pollution, no additional support for a customary information law duty to inform seems warranted. There is no indication in the air pollution treaties that the parties intended the treaties to reflect an existing international law duty to inform.[68] Indeed, the language of the most prominent air pollution agreement, the ECE Convention on Long-Range Transboundry Air Pollution, implies the contrary. The treaty is extremely detailed in its information exchange obligation, and explicitly provides that the obligation applies between contracting parties.[69] Such a formulation seems to contradict the assertion that the parties thereby intended merely to reflect in their treaty a general international law duty to inform.

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[63] *Id.* art. 6(1), at 405. The article further provides that states "should" make an environmental assessment "to appraise whether planned activities imply a significant risk of, or increase in, long-distance transfrontier air pollution." *Id.* art. 6(2), at 406.

[64] *Id.* paras. 108, 114, 116, at 402-04.

[65] The ECE Convention, U.N. Doc. ECE/HLM.I/R.1 (1979), *reprinted in* 18 I.L.M. 1442 (1979).

[66] *Id.* art. 8 at 1445.

[67] *Id.* arts. 8(a), (b).

[68] The same *opinio juris* problem applies to the other conventions cited in the ILA preliminary report. *See* PARIS DRAFT AIR POLLUTION ARTICLES, *supra* note 61, para. 112, at 403.

[69] ECE Convention, *supra* note 65, at 1445.

The ILA reports on the Montreal Water Pollution Rules and on the Paris Draft Air Pollution Articles each basically assumes that there is a legal duty to inform in international environmental law. Each report bases this assumption largely upon the analysis contained in the 1982 Montreal Report on the Transfrontier Pollution Rules. To the extent that each ILA report in addition cites the inclusion of "duty to inform" articles in specific air and water agreements, that showing of additional state practice certainly strengthens the policy recommendations made in the report. There is, however, nothing in either ILA report to show that the states accepting such treaties thereby intended to accept the "duty to inform" in any light other than as a specific treaty obligation. Hence the ILA air and water pollution rules do not advance significantly the proposition that international law now obligates acting states to inform affected states of transboundary risks.[70]

IV. THE 'DUTY TO INFORM' OF ENVIRONMENTAL HAZARDS ENDORSED BY INTERNATIONAL EXPERTS

A. *The International Law Commission*

As was indicated at the outset of this paper, the International Law Commission's[71] "Schematic Outline" of the topic entitled "international liability for injurious consequences arising out of acts not prohibited by international law"[72] includes the duty of source states to inform affected states of "all relevant and available information" concerning transboundary risks created by activities taking place within the source state's territory or control.[73] Much of the discussion of the "international liability" topic in the International Law Commission,[74] in the General Assembly,[75] and in scholarly

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[70] The United States-Canadian Memorandum of Intent Concerning Air Pollution, Aug. 5, 1980, 32 U.S.T. 2521, T.I.A.S. No. 9856, *reprinted in* 20 I.L.M. 690, offers evidence of an exchange of information practice engaged in between the United States and Canada independent of treaty obligation. *See Id.* art. 3, which provides that the two governments "shall continue and expand their long-standing practice of advance notification and consultation on proposed actions involving a significant risk or potential risk of causing or increasing transboundary air pollution." 20 I.L.M. at 692. There is, however, nothing in the agreement to show that the "long-standing practice" has been engaged in out of a sense that such a practice is required by international law.

[71] The International Law Commission (ILC) is a body of independent experts appointed by the General Assembly to codify and progressively develop international law. *See* U.N. CHARTER art. 13, para. 1(a).

[72] *See supra* note 2.

[73] *See ILC Schematic Outline, supra* note 2, Sec. 2, para. 1, at 62.

[74] *See, e.g., Report of the International Law Commission on the Work of its 39th Session,* 42 GAOR Supp. (No. 10) at 89, 96-115, U.N. Doc. A/42/10 (1987) (hereinafter *1987 ILC Report*).

[75] *See, e.g.,* U.N. Docs. A/C.6/39/SR.33-SR.47 (1984) (summary records of the General Assembly's Sixth Committee at the 39th Session of the General Assembly).

writings,[76] has centered on the nature and extent of the international law liability of states for transboundary environmental harm, and on the relationship between this topic and the ILC consideration of the more general topic of state responsibility.[77] In contrast, very little attention has been paid to the requirement in the Schematic Outline that the source state inform affected states of transboundary risks.

The duty to inform functions essentially as a procedural rule in the Schematic Outline. When an activity "gives or may give rise" to transboundary harm, "the acting state has a duty to provide the affected state with all relevant and available information."[78] Information may be withheld "for reasons of national or industrial security," but in such cases the acting state "must inform the affected State that information is being withheld," and such withholdings "cannot justify a failure to give an affected State a clear indication of the kinds and degrees of loss and injury" that might be expected to occur.[79] The Schematic Outline further provides that failure to provide the required information "shall not in itself give rise to any right of action,"[80] but that in such a case "the affected State shall be allowed a liberal recourse to inferences of fact and circumstantial evidence in order to establish whether the activity does or may give rise to loss or injury."[81]

In explaining the approach taken in the Schematic Outline, the International Law Commission's Special Rapporteur, Robert Q. Quentin-Baxter, observed that "the rules contained in the schematic outline . . . are not a substitute for specific conventional or customary rules."[82] Indeed, the main purpose of the topic was "to encourage the elaboration or emergence of such rules";[83] the Special Rapporteur said that, by itself, the Schematic Outline can neither modify nor supplant any established legal obligation.[84] This explanation of the Schematic Outline marks it as a weigh-station between the abstract theoretical discussions contained in Quentin-Baxter's initial reports[85] and the draft articles on the subject that Quentin-Baxter first pre-

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[76] *See, e.g.*, Handl, *Liability as an Obligation Established by a Primary Rule of International Law*, 16 NETH. Y.B. INT'L L. 49 (1985); Magraw, *Transboundary Harm: The International Law Commission's Study of "International Liability"* 80 AM. J. INT'L L. 305 (1980).

[77] *See, e.g.*, Handl's discussion of "Liability for Lawful Conduct" as contrasted with state liability pursuant to the "secondary rule" of state responsibility. Handl, *supra* note 76, at 54-64.

[78] *ILC Schematic Outline, supra* note 2, sec. 2, para. 1, at 62.

[79] *Id.* sec. 2, para. 3, at 63.

[80] *Id.* sec. 2, para. 8, at 63. *See infra* Part VI.

[81] *Id.* sec. 5, para. 4, at 63-64.

[82] *See* Fourth Report, *infra* note 85, para. 19, at 206.

[83] *Id.* para. 32, at 211.

[84] *Id.* para. 19, at 206.

[85] The ILC's initial Special Rapporteur on the "international liability" topic, Robert Q. Quentin-Baxter, presented five reports: (1) [1980] 2 Y.B. INT'L L. COMM'N 247 (Part I), U.N. Doc. A/CN.4/334; (2) [1981] 2 Y.B. INT'L L. COMM'N 103 (Part I) U.N. Doc. A/CN.4/346; (3) [1982] 2 Y.B. INT'L L. COMM'N 51 (Part I), U.N.

sented in 1984.[86] Thus, although the provisions of the Schematic Outline are not in themselves draft articles on the international law of state liability for transboundary harm, these provisions reflect the Special Rapporteur's understanding of the direction that should be taken in the ILC's codification and progressive development of the law on this topic.

An understanding of the Schematic Outline as a road map for future ILC work on the "international liability" topic leaves unclear the central question in our analysis. Does the "duty to inform" provision of the Outline reflect Quentin-Baxter's understanding of existing law or his aspirations for the development of international law?

In drafting the "duty to inform" provision of the Schematic Outline, the Special Rapporteur could have taken one of two differing approaches corresponding to the twin roles of the International Law Commission. He could have intended the draft to function as a preliminary "codification" of the law, reflecting his understanding of the extent to which existing law imposed international liability for the harmful consequences of lawful acts. Or the Special Rapporteur could have viewed the draft as "progressive development" of the law, reflecting his view of the direction in which the law should develop. Consistent with ILC practice, Quentin-Baxter's reports do not distinguish between codification and progressive development.[87] Thus there is no direct indication in his reports as to whether the "duty to inform" articulated in the Schematic Outline reflects a judgment that such a duty had already become part of general international law, or whether the provision was included because the Special Rapporteur believed that the law should be progressively developed to include such a duty.

The Special Rapporteur's reports indirectly suggest that support for the Schematic Outline's "duty to inform" may be found in the parallel provision contained in the International Law Association's Montreal Rules of International Law Applicable to Transfrontier Pollution.[88] Considering that the Schematic Outline was drafted a decade after the Stockholm Conference, the Stockholm experience with draft "Principle 20"[89] undoubtedly also

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Doc. A/CN.4/360 [hereinafter Third Report]; (4) [1983] 2 Y.B. INT'L L. COMM'N 201 (Part I), U.N. Doc. A/CN.4/373 [hereinafter Fourth Report]; (5) [1984] 2 Y.B. INT'L L. COMM'N 155 (Part I), U.N. Doc. A/CN.4/383 [hereinafter Fifth Report]. Julio Barboza was appointed Special Rapporteur on Quentin-Baxter's death in 1985. Barboza has submitted three reports: (1) [1985] 2 Y.B. INT'L L. COMM'N 97 (Part I), U.N. Doc. A/CN.4/394; (2) [1986] 2 Y.B. INT'L L. COMM'N (Part 1), U.N. Doc. A/CN.4/402 [hereinafter Barboza Second Report]; and (3) [1987] 2 Y.B. INT'L L. COMM'N (Part 1), U.N. Doc. A/CN.4/405 [hereinafter Barboza Third Report].

[86] *See* Fifth Report, *supra* note 85.

[87] *See* Fourth Report, *supra* note 85, para. 39, at 212.

[88] *See* ILA MONTREAL TRANSFRONTIER POLLUTION RULES, *supra* note 27 and accompanying text for the language of the "prior notice" provision. *See also* Fourth Report, *supra* note 85, paras. 24-31, at 208-10.

[89] *See supra* notes 3-14 and accompanying text.

influenced the drafting of the Schematic Outline's duty to inform provision. Furthermore, the treatment of the duty to inform principle in the General Assembly and U.N. Environment Programme resolutions[90] no doubt also contributed to the Schematic Outline.

The Special Rapporteur cited no specific precedents or state practice in support of the "duty to inform" in the Schematic Outline. The absence of such support may be explained by the preliminary status of the Schematic Outline; when its provisions are reduced to draft articles, the ILC's successor Special Rapporteur, Julio Barboza, will undoubtedly support the draft articles with copius citations to state practice.[91] It should then become clear whether the Special Rapporteur discerns a "duty to inform" in current law, and whether the Commission supports that view. For the moment, however, the formulation in the Schematic Outline adds little, if any, weight to legal analysis of the existence in current law of a "duty to inform" of transboundary risks.

B. *The Experts Group on Environmental Law*

An "Experts Group on Environmental Law" was established in 1985 to formulate "legal principles for environmental protection and sustainable development"[92] for consideration by the World Commission on Environment and Development. The Experts Group was asked "to reinforce existing legal principles and to formulate new principles and rules of law,"[93] giving special attention to "legal principles and rules which ought to be in place now or before the year 2000 to support environmental protection and sustainable development within and among all States."[94] The Experts Group approved legal principles that the Group considered appropriate for a "Draft Convention on Environmental Protection and Sustainable Development." The current state of environmental law is addressed in commentary that accompanies the Group's statement of legal principles.[95]

Several of the Draft Convention articles support the idea that there is an international legal "duty to inform" of transboundary risks. Article 6 provides that:

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[90] *See supra* notes 14-21, 35-42 and accompanying text.

[91] *See* Barboza Third Report, *supra* note 85, at 8-22, which extensively reviews state practice in support of the initial five articles in the ILC draft on the "international liability" topic.

[92] WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, EXPERTS GROUP ON ENVIRONMENTAL LAW, ENVIRONMENTAL PROTECTION AND SUBSTANTIAL DEVELOPMENT 1 (Nijhoff ed. 1987) (italics omitted) [hereinafter EXPERTS GROUP REPORT].

[93] *Id.*

[94] *Id.*

[95] The articles formulated by the Experts Group were approved by the Group; the comments to the articles "were generally agreed to by the participants . . ., but time did not permit either full review or endorsement in detail" of each comment. *Id.* at 2.

> "States shall inform all persons in a timely manner of activities which may significantly affect their use of a natural resource or their environment . . . .[96]

The Experts Group's Comment observes that the quoted principle "is a fairly novel one, certainly insofar as it also comprises instances of pollution or degradation of nature occurring entirely within an area under the national jurisdiction of a State."[97] Curiously, the Comment does not speak directly to transboundary occurrences.

Support for the general principle of Article 6 was found in the "World Charter for Nature;"[98] the Charter contains "principles of conservation by which all human conduct affecting nature is to be guided and judged."[99] The World Charter was "solemnly proclaimed" by the General Assembly in 1982.[100] The Charter addresses both states and persons, providing that states shall implement "applicable international legal provisions for the conservation of nature and the protection of the environment."[101] However, the Charter does not specify which of its provisions embody or reflect legal obligation. It would therefore be difficult to conclude that the Assembly regarded the World Charter's notice provisions as obligatory.

The Experts Group addressed the "Exchange of Information" concerning "environmental interferences" in transboundary natural resources[102] in Article 15, which provides as follows: "States shall provide the other States concerned . . . with all relevant and reasonably available data concerning a . . . transboundary environmental interference [with a transboundary natural resource]."[103] The Comment to Article 15 states that "the principle contained in the article . . . may be regarded as an established principle of

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[96] *Id.* at 63. The article also provides that states "shall grant the concerned persons access to and due process in administrative and judicial proceedings." *Id.*

[97] *Id.*

[98] World Charter for Nature, G.A. Res. 37/7, 37 U.N. GAOR, Supp. (No. 51), U.N. Doc. A/37/51 (1982) [hereinafter World Charter].

[99] *Id.* at 17. Paragraphs 16 and 23 of the World Charter for Nature were quoted; the former provides that "planning [of activities] shall include . . . assessments of the effects on nature" that "shall be disclosed to the public . . . in time to permit effective consultation and participation." World Charter, *supra* note 98, at 18, *reprinted in* EXPERTS GROUP REPORT, *supra* note 92, at 64.

[100] The Assembly vote was 111 to 1, with 18 abstentions. The United States cast the lone negative vote.

[101] World Charter, *supra* note 98, at para. 21(c).

[102] The term "transboundary natural resource" means a natural resource that "physically crosses the boundary" between states. EXPERTS GROUP REPORT, *supra* note 92, at 37.

[103] *Id.* at 95. The term "transboundary environmental interference" includes an interference the "physical origin" of which is located "outside the area under national jurisdiction of a State in which the effects caused by the interference occur." *Id.* at 38.

international environmental law."[104] Support for this proposition was found in treaties dealing with the protection and use of international watercourses and in international organization resolutions focused on shared or transboundary natural resources. One prominent example of the latter is Article 3 of the Charter of Economic Rights and Duties of States, adopted by the General Assembly in 1974. That article provides: "In the exploitation of natural resources shared by two or more countries, each State must cooperate on the basis of a system of information and prior consultations."[105] The numerous treaties cited by the Experts Group provide evidence that states follow a general practice of informing other states about the use of shared natural resources. Resolutions adopted by international organizations provide evidence of *opinio juris* that can be relied upon to characterize the practice as a norm of customary international law.

In Article 16 the Experts Group provided more generally that:

> States planning to carry out or permit activities . . . which may entail a transboundary environmental interference or a significant risk thereof causing substantial harm in an area under national jurisdiction of another State . . . shall give timely notice to the States concerned. In particular, they shall . . . provide such relevant information as will permit those other States to make an assessment of the probable effects of the planned activities.[106]

The Comment asserts that the quoted principle "may be considered as a general principle of international environmental law."[107] The underlying idea "is to prevent the commission of unlawful transboundary interferences and to prevent other States from being confronted with *faits accomplis*. The principle may, therefore, also be looked upon as an application of the principle of good faith in international relations."[108]

The Experts Group's Comment cites as support treaties concerning the use of international watercourses and boundary waters, and treaties dealing with potential transfrontier pollution, including radioactivity and air pollution, as well as international organization resolutions concerning the use of shared natural resources.[109] The difficulty is that, apart from the international organization resolutions that address the more narrow subject of shared natural resources, the precedents cited by the Experts Group do not establish *opinio juris* with respect to a broad "duty to inform" of activities that pose a transboundary risk. To the extent that effective lawmaking requires *opinio juris*, it is difficult to accept the Comment's conclusion that the "duty to inform" has emerged as an obligatory legal principle.

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[104] *Id.* at 95.

[105] G.A. Res. 3281, art. 3, 29 U.N. GAOR, Supp. (No. 31) at 50, U.N. Doc A/9631 (1974). *See* KIRGIS, PRIOR CONSULTATION IN INTERNATIONAL LAW 80-82 (1983).

[106] EXPERTS GROUP REPORT, *supra* note 92, at 98.

[107] *Id.*

[108] *Id.* at 99.

[109] *Id.* at 99-103.

Annex 516

E. B. Weiss, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* (United Nations University, 1989), pages 293-295

INNOVATION IN INTERNATIONAL LAW

IN FAIRNESS TO FUTURE GENERATIONS:

International Law, Common Patrimony, and Intergenerational Equity



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APPENDIX A

GOA GUIDELINES ON INTERGENERATIONAL EQUITY

The Advisory Committee established to the United Nations University Project on "International Law, Common Patrimony and Intergenerational Equity" adopts, on the basis of the major study undertaken, the following statement.

The increasing concerns over the depletion of natural resources and the degradation of environmental quality and the recognition of the need to conserve the natural and cultural heritage have evoked responses at all levels: national, regional and international; governmental and non-governmental. These concerns have been expressed in new political initiatives, in incipient economic adjustments and in significant developments in the legal field.

One innovative response to these concerns is represented by the present project which attempts to introduce for the first time in a systematic and comprehensive manner, a long-term temporal dimension into international law as a complement to the traditional spatial dimension.

This temporal dimension is articulated through the formulation of the theory of "intergenerational equity"; all members of each generation of human beings, as a species, inherit a natural and cultural patrimony from past generations, both as beneficiaries and as custodians under the duty to pass on this heritage to future generations. As a central point of this theory the right of each generation to benefit from and develop this natural and cultural heritage is inseparably coupled with the obligation to use this heritage in such a manner that it can be passed on to future generations in no worse condition that it was received from past generations. This requires conservation and, as appropriate, enhancement of the quality and of the diversity of this heritage. The conservation of cultural diversity is as important as the conservation of environmental diversity to ensure options for future generations.

Specifically, the principle of intergenerational equity requires conserving the diversity and the quality of biological resources, of renewable resources such as forests, water and soils which form an integrated system, as well as of our knowledge of natural and cultural systems. The principle requires that we avoid actions with harmful and irreversible consequences for our natural and cultural heritage and that

we dispose of nuclear and other wastes without unduly shifting the costs to coming generations.

Planetary rights and planetary obligations follow from the principles of equity governing the relationship between generations. These pertain to valued interests of past, present and future generations, covering natural and cultural resources. They will become enforceable as they find expression in customary and conventional international law. In case of violations, claims should be raised on behalf of present and future generations. There is a complementarity between recognized human rights and the proposed intergenerational rights.

To implement intergenerational rights and obligations, the following stragegies are proposed: a) representation by States not only of present but also of future generations; b) designation of ombudsmen or commissioners for protecting the interests of future generations; c) monitoring systems for cultural and natural resources; d) conservation assessments giving particular attention to long-term consequences; e) measures to ensure use of renewable resources and ecological systems on a sustainable basis; f) commitment to scientific and technical research to advance the purposes set out above and g) programmes of education and learning at all social levels and age groups especially the young generations. It is particularly important to give attention to the proper functioning and maintenance of facilities and services. It is crucial not only to establish services and facilities for conserving natural and cultural resources but also to take appropriate measures for maintaining them.

National institutions and decision-makers and international organizations concerned with the conservation and development of natural resources and cultural systems should be encouraged to integrate as a matter of course the intergenerational perspective in their activities and in the elaboration of international principles and agreements respecting our common heritage.

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R. Caballeros-Otero & R. Zapata, *The impacts of natural disasters on developing economies: implications for the international development and disaster community* in DISASTER PREVENTION FOR SUSTAINABLE DEVELOPMENT: ECONOMIC AND POLICY ISSUES, ed. Mohan Munasinghe & Caroline Clarke (The World Bank, 1995), pages 11-40



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The interpretations and conclusions in this report are those of the authors and do not necessarily represent the views of the World Bank or its member institutions.

UN General Assembly Resolution 236 of 1989 launched the International Decade for Natural Disaster Reduction (IDNDR, 1990–2000) to "reduce through concerted international action, especially in developing countries, the loss of life, property damage, and social and economic disruption caused by natural disasters." IDNDR focuses on natural disasters such as earthquakes, tsunamis, volcanic eruptions, landslides, avalanches, cyclones, floods, drought, and locust infestations.

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2



The Impacts of Natural Disasters on Developing Economies: Implications for the International Development and Disaster Community

Romulo Caballeros Otero and Ricardo Zapata Martí

Natural disasters have numerous impacts on national economies that can bear on the conduct of economic policy, on the sustainability of long-term development strategies, and on productive performance. These impacts are particularly relevant in the countries of Latin America and the Caribbean, which frequently experience natural disasters of various origin and intensity, with the sequel of human lives lost and grave economic and social impact.

During the past three decades, the frequency and severity of disasters and adverse natural cycles have been compounded by the emergence of new, quasi-natural and unpredictable events. A nation's or a society's capacity to respond to and face these unscheduled happenings and the nature of the actions necessary to do so are in an important measure affected by the ability to measure, appraise, and evaluate the damages caused.

The complex matrix of such events comprises both natural disasters, such as earthquakes, tsunamis, hurricanes, floods, volcanic eruptions, and plagues, and relatively new phenomena that can be man-made or induced by human conduct, such as ecological disasters, desertification, mega-accidents, urban disasters, or civil wars. Their impact can be seen in the loss, first, of human capital and, second, of productive capital. In the vast majority of cases, emergency actions tend to alter the conduct of current policies, and the reconstruction efforts tend to induce serious changes in economic policies in the medium term. In some cases, effects impinge on national priorities and lead to modifications of development policy that are felt in the longer term and cause irre-

versible adverse effects. Furthermore, depending on its economic position prior to the disaster, a country may find itself unable to undertake the required program and projects for rehabilitation and reconstruction and may require international cooperation—both technical and financial—to implement them.

Some intrinsic elements of the nation, society, or economy affected have, in general, implications for the efforts needed to face the emergency, undertake the reconstruction, and, finally, surmount the consequences of the disaster. Relative size of the economy affected, the magnitude and depth of the event, and the economic and sociopolitical conditions of the country at the time are some of these elements. Given the persistence and growing diversity of these phenomena and the magnitude of their socioeconomic consequences, it is natural for the international community to give more attention and support to the development of means to prevent or, at least, mitigate their more severe negative effects.

The international community—via multilateral lending and technical cooperation organizations as well as bilateral assistance programs of donor countries—is willing to support these undertakings and requires detailed and reliable information concerning the magnitude of the damages. Potential donors expect a precise determination of the most affected sectors and areas, identification of the post-emergency projects and plans that require financial and technical cooperation, and determination of the country's capacity to handle its share of the burden in the rehabilitation and reconstruction efforts. Most recently, at the twenty-fifth session of the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) member countries approved a resolution requesting systematic research and analysis of the economic effects of disasters in countries in the region as well as of possible undertakings to prevent and mitigate disasters and reduce their effects (Cartagena de Indias, Colombia, April 20–27, 1994; the text of this resolution is presented in appendix 2-1).

This chapter provides some elements that may help to prevent, mitigate, and reduce the effects of disasters by synthesizing experiences accumulated in the last twenty years through observing and appraising natural disasters in Latin America. It does not make exhaustive reference to the events themselves but rather highlights the immediate, medium, and long-term effects and actions to be undertaken. Since 1972, ECLAC has been assisting member states to assess damages caused by natural disasters. A damage assessment methodology has been developed and tested to estimate the extent of the damages, their economic impacts, and the requirements for rehabilitation and reconstruction, based on the country's capacity to execute programs after a disaster occurs (see ECLAC 1991). The ECLAC methodology facilitates the systematic definition of the requirements for international cooperation in a period of time that does not exceed one to two months; it requires information that can be collected in the days immediately after the disaster strikes and that can be compared to macroeconomic data and forecasts available before the disaster. The methodology is applied to estimate the economic impact of the events rather than to appraise effects of a different nature, such as social short- or long-term impact or ecological and environmental damages.

The first part of the chapter offers general remarks on the typology and salient characteristics of an event, successive phases that take place after it, as well as some methodological insights into dam-

age appraisal. Some conceptual remarks are made on the links between the nature of the country affected, the dimension of the event, and its socioeconomic consequences. From these are derived concepts that will be used in the rest of the chapter as well as some working hypothesis.

The following section presents an analytical description of the components of the methodology for appraising different types of disasters as well as for measuring their effects in the national economy and society. An effort is made to summarize in systematic form the experience of such tasks and to present the implications that disasters may have for a country's institutions, depending on the political or economic situation when the disaster occurred.

This is followed by a synthesis of the different types of consequences that disasters have in the long term, both for development and for economic performance, such as the balance of payments, production, income growth, public finance, and so forth. Special attention is paid to damage control and reconstruction and how they affect they country's national priorities and capability to return to its development path. In this last context, the role of the international donor community and the need for external resources are specifically addressed.

Finally, the last section discusses international efforts needed to prevent disasters. Preventing disasters and reducing their impact must be part of a systematic approach that goes beyond emergency assistance or reconstruction and links development potential and sustainability to these actions.

General considerations

The cycle following a disaster is usually divided into three phases: emergency, rehabilitation and immediate recovery or transition, and reconstruction. The emergency phase refers to the most immediate period after the disaster strikes, when actions to save human lives or to provide first aid are undertaken. It may include actions such as search and rescue, emergency first aid, temporary shelter, provisional restoration of transportation and communication links, emergency repairs to essential utilities and services, and the first efforts to assess the number of persons affected and to estimate damages suffered by public and private property. The rehabilitation or transition phase covers a time frame in which efforts are made to restore the most pressing services and most essential social infrastructure. It includes building temporary shelters as well as repairing transport infrastructure and public utilities and services. The return to normal work, the creation of new jobs, the offering of credit and financial resources, and the initiation of projects to address the immediate consequences of the disaster are among the rehabilitation measures needed to assist the population and communities affected. The reconstruction phase refers to the period required to restore the physical infrastructure and services damaged or destroyed by the disaster.

Types and main characteristics of disasters

Different types of disasters may occur. A broad definition includes dramatic, sudden, unscheduled events that are often accompanied by large losses of human life, suffering and affliction to a society or a significant part of it, and a temporary breakdown of prevailing lifelines and systems. Such events cause considerable material damages and interrupt the normal functioning of an economy and of society in general (other types of natural events, such as droughts, take a long time

to develop into a major disaster and may cause devastating effects in society as well). Disasters so defined can be classified as either natural or man-made.

The most important natural phenomena, according to the frequency of their occurrence worldwide in the last twenty years, are the following: floods, typhoons, hurricanes and cyclones, earthquakes, tornados, whirlwinds and thunderstorms, snowstorms and blizzards, heat waves, cold spells, volcanic eruptions, landslides and landslips, avalanches, tidal waves and tsunamis, and blasting mildew, frost, droughts, sand, or dust storms. The most common man-made disasters are caused by explosions, firestorms, airplane crashes and collisions, movements of the earth or water, and the collapse of dams, embankments, and water reservoirs. A growing list of quasi-natural disasters can be added to these, including processes such as air, water, or land pollution and the reduction and destruction of forests. Also to be considered are social disasters, such as epidemics, famine, riots and pogroms, massacres, terrorist acts, and wars.

Most of the remarks made in this chapter relate to the major natural disasters that have caused the most damage in Latin America and the Caribbean; they have either a meteorological or a geological origin. Tables 2-1 and 2-2 summarize the economic and social effects most commonly associated with natural disasters, grouped by major categories. An especially interesting and devastating natural phenomenon in Latin America is the modification of sea currents and wind patterns that has caused major floods and affected the climate, water quality, and fishing patterns near the Pacific shores of South America. The Latin American and Caribbean region is particularly prone to natural phenomena, especially in the Caribbean, which lies in the path of major tropical storms and hurricanes. The region is also part of the so-called Fire Ring that encompasses the Pacific Ocean and delineates the contact zones of the major tectonic plates where many earthquakes and volcanic eruptions occur (a partial list of the major disasters that have affected Latin America and the Caribbean in the last

Table 2-1: Immediate Economic and Social Effects of Natural Disasters

Type of effect	*Earthquake*	*Cyclone*	*Flood*	*Tsunami*	*Volcanic eruption*	*Fire*	*Drought & famine*
Temporary migration							x
Permanent migration							x
Loss of housing	x	x	x	x	x	x	
Loss of industrial production	x	x	x	x		x	
Loss of commerce	x	x	x	x		x	
Loss of agricultural production (plant crops and harvest)		x	x	x	x	x	x
Damage to infrastructure	x	x	x	x		x	
Disordered markets & distribution	x	x			x		
Interrupted transportation systems	x		x				
Breakdown of communication	x	x	x	x		x	
Panic						x	
Social disruption	x	x				x	

Source: Adapted from Cuny 1983.

Table 2–2: Effects of Natural Disasters on the Earth's Surface, Infrastructure, and Agriculture

Type of disaster	*Effects on the earth's surface*	*Effects on infrastructure*	*Effects on agriculture*
Earthquake	Tremors and fissures	Damage to construction, roads, ditches, and bridges	None
	Landslips	Covered and buried structures; embankments on rivers that cause local flooding	Some local losses to affected area
	Liquefaction of the earth	Damage to buildings that sink	None
	Collapses underground	Damage to underground construction, conduits, and cables; change in the course of underground water	Temporary loss of irrigation
	Avalanches	Damage to buildings, roads,	Local losses of plants and forests ditches, and bridges
Hurricane, typhoon, and	Strong, gusty winds	Damage to buildings and distribution and high-tension lines	Loss of trees; damage to plants, especially grains
cyclone	Flooding (through rainfall)	Damage to bridges and buildings; landslides and landslips	Loss of plants, especially roots and tubers; erosion
	Flooding (through storms)	Damage to bridges, roads, and buildings	Extension damage to plants and irrigation systems; saline deposits: contamination and erosion of earth
Drought	Dryness of earth	No major damage	Destruction of crops and forests
	Wind gusts	Minor damage	Erosion and minor damage to forests
	Desertification	No major damages	Land covered with sand; type and time of crops altered; trees ruined; dry-resistent thorny, bushy vegetation increased
Flood	Erosion	Softening of building's foundations	Destruction of crops; alteration of the type and time of harvest
	Water-saturation and landslides	Buried buildings; damage to other structures	Localized damage to fields of crops and forests
	Sedimentation	No major effects	Improvement in the quality of terrain
Tsunami	Floods	Destruction of or damage to buildings, bridges, irrigation systems; pollution of waters	Localized destruction of crops; saline deposits and destruction of coastal forest and vegetation and water wells
Volcanic eruption	Eruption and deposit of debris on surface	Destroyed, damaged, or buried buildings and other structures; fires	Extensive defoliation, forest damage, and losses near eruption site
		Damage to buildings, ditches, and bridges	Buried crops and destroyed earth and forests; forest fires; temporary damage to earth; pollution

Note: Effects on other productive sectors such as industry and services are mostly reflected in damage to infrastructure.
Source: Adapted from Cuny 1983.

Table 2-3: Major Disasters in Latin America and the Caribbean Since 1972

Date	*Place*	*Event*
1972	Managua, Nicaragua	Earthquake
1974	Honduras	Hurricane (Fifi)
1975	Grenada	Tropical storm
1975	Antigua and Barbuda	Earthquake
1976	Guatemala	Earthquake
1979	Dominica	Hurricane (David)
1979	Dominican Republic	Hurricanes (David and Frederick)
1979	Nicaragua	Civil war consequences
1982	Nicaragua	Floods
1982	El Salvador	Several natural disasters
1982	Guatemala	Meteorological phenomena
1982	Nicaragua	Meteorological phenomena
1983	Bolivia, Ecuador, and Peru	Meteorological phenomena (change of path of sea currents)
1985	Mexico	Earthquake in Mexico City
1985	Colombia	Volcanic eruption of Nevado del Ruiz and mudslide in the city of Armero
1986	El Salvador	Earthquake in San Salvador
1987	Ecuador	Natural disaster (earthquake and landslides)
1988	Nicaragua	Hurricane (Joan)
1989	Mexico	Gas explosion (San Juanico)
1990	Mexico	Hurricane (Gilbert)
1992	Mexico	Gas explosion (Guadalajara)
1992	Nicaragua	Volcanic activity (Cerro Negro)
1992	Nicaragua	Tsunami (Pacific coast)
1992	El Salvador	Civil war
1993	Florida	Hurricane (Andrew)
1994	Los Angeles	Earthquake

Note: Specific disasters are referred to in the text. For additional information, see the specific studies on each case, which are included in the references.

thirty years is given in table 2-3; the references provide a list of the documents prepared by ECLAC since 1972 to appraise the economic effects of natural disasters.

Damage assessment methodology

To facilitate understanding of the methodology, it is necessary to define terms that relate to direct and indirect damages and to secondary effects. Direct damage refers to all damage to fixed assets, capital, and inventories of finished and semifinished goods, raw materials, and spare parts. It includes total or partial destruction of physical infrastructure, buildings, machinery, and equipment, transport and storage facilities, and furniture as well as damage to farmland and soils, irrigation and drainage works, dams, and so forth. In the particular case of agriculture, the destruction of crops ready to harvest is considered direct damage. Essentially, direct damage refers to physical destruction, whether complete or partial, that occurs simultaneously with or immediately after the disaster.

Indirect damage refers to damage to the flow of goods that will not be produced

and of services that will not be provided after the disaster strikes. The period of time covered begins immediately after the disaster and may last several months or years, depending on the type and characteristics of the disaster. Indirect damages are measured in monetary—not physical—terms and may include, among others, the following:

- Increased operational expenditures in a given sector due to the destruction of physical infrastructure or inventories and increased costs for the provision of services.
- Additional costs incurred in a given sector or activity due to the need to use alternative means of production or increased costs of providing services, such as the cost of providing transportation when alternate routes are longer than normal routes.
- Loss of corporate income as a result of the inability to provide services, such as utilities, and loss of personal income as a result of total or partial loss of an individual's means of livelihood.
- Unexpected expenditures related to meeting new needs arising from the disaster, such as the costs of vaccination campaigns to avoid epidemics.
- Loss of production or income in activities located either downstream or upstream of activities directly affected by the disaster, such as when, after an industry is destroyed, suppliers cut back their activities because they have no alternative markets or customers reduce their purchases because they have no other supplier.
- Investments incurred because fixed assets or activities must be moved to safer areas after a disaster.

The sum of direct and indirect damages represents the total—material and monetary—damage inflicted by a disaster. Care must be exercised when assessing both types of damage: the amount of indirect damages often exceeds that of direct damages and may cripple a weak economy and render it unable to meet the rehabilitation and reconstruction required.

Secondary effects refer to the impact of the disaster on the overall economic performance of a country as measured by the most significant macroeconomic variables. The estimated changes in these variables due to the disaster complement the estimated direct and indirect damages, although they cannot be mathematically added to express the total amount of damage inflicted.

A disaster's main secondary effects have an impact on the following:

- Overall and sectoral gross domestic product (GDP);
- Balance of trade and the balance of payments;
- Level of indebtedness and of monetary reserves;
- State of public finances; and
- Amount of gross capital investment.

Depending on the nature of the disaster, the secondary effects of inflation on employment and household income may also be relevant.

Gross domestic product can decline when the output of sectors that have sustained direct and indirect damages declines; it can grow, however, when the construction sector surges as a result of rehabilitation and reconstruction activities. The balance of trade and the balance of payments can be affected when exports shrink because output diminishes and imports grow to satisfy unmet internal demands and the requirements of rehabilitation and reconstruction. Public sector spending grows to meet the needs of

the emergency and rehabilitation phases, and tax revenues shrink because output and exports diminish, which may combine to create or increase fiscal budget deficits. Reconstruction efforts may involve acquiring or increasing foreign or local indebtedness. Simultaneously, prices may go up because of shortages or speculation, thus creating or worsening inflationary pressures on the economy. Moreover, depending on the economic position of the country prior to the disaster and the size of the secondary effects, the country's international reserves and ability to meet external commitments may be jeopardized.

In order to assess the secondary effects of a natural disaster, it is assumed that all direct and indirect sectoral damages have been evaluated beforehand, taking stock of the information needed to assess sectoral damages when appropriate. ECLAC's damage assessment manual provides details on the sectoral assessment methodology. Nevertheless, it is important to note here that, to be able to assess secondary effects, sectoral evaluations of damages must include estimates of foreseeable losses in output (of goods and services) during the period required to rehabilitate farmlands, industrial production, and physical and social infrastructure. They must also include estimates of indirect effects on household employment and income, exports and imports, gross investment, taxation, and so forth for each sector affected. In addition, an estimation must be made of the period of recovery for each sector or activity during which the indirect effects are present.

Estimation of Macroeconomic Effects

The estimation of the effects of natural disasters on the economic position of a country is based on a comparison of the economic performance anticipated before the disaster struck and a modified projected performance estimated after the damage assessment has been completed. In that respect, the ECLAC damage assessment methodology requires, as an essential base for comparison, the macroeconomic performance prospects for the year during which the disaster strikes. The methodology involves estimating how much such projections will be altered as a result of the direct and indirect damages sustained during and after the disaster. The basic macroeconomic information required for this work includes the following:

- Projections of overall and sectoral economic growth for the year during which the disaster takes place and, ideally, for the two subsequent years.
- Trends in the main balance of payments aggregates of exports and imports, levels of external financing, international reserves and foreign indebtedness, international prices and demand for the country's main export products, and debt servicing agreements.
- The approved fiscal budget, including estimates of fiscal deficit if any, for the year during which the disaster strikes and estimates of fiscal income and expenditures for the months preceding the disaster.
- Other sectoral and macroeconomic statistics such as crop growth index, trends in manufacturing sector output as well as monthly consumer and producer price index, urban and rural unemployment survey data, and so forth.

Effects on Economic Activity

The macroeconomic aggregate that best expresses variations in the overall level of economic activity is the GDP. Constant prices—preferably current prices at the

time of the assessment—should be used to illustrate the disaster's real effects on economic growth rates. However, expressing the main aggregates that make up domestic supply (gross output for each branch of economic activity) and demand (expenditures for public and private consumption and capital formation) in current values for the year or period in which the disaster occurs frequently poses a statistical problem. In many countries, this information is available only in constant prices for a given year, usually a census year.

To solve that methodological problem, an appropriate and reliable price index, such as the GDP deflator, the wholesale price index, or the cost-of-living index, must be adopted to convert these figures into current values for the year in which the disaster occurs. After completing such adjustments, projected economic data for the year(s) following the disaster should be expressed in constant prices of the year of the disaster to eliminate the effects of inflation and enable a valid determination of the disaster's effects on real growth rates.

The sectoral damage or losses to be used in the macroeconomic assessment include the following:

- Products and services that, owing to the destruction of infrastructure and machinery, will no longer be produced.
- Income that will no longer be received, estimated on the basis of salaries, wages, and profits that will not be forthcoming while production plants are being rehabilitated (for small businesses in which a wide variety of goods and services is produced, this method of estimation is more feasible and reliable than the previous one).
- In the special case of the housing rental sector—included in the national accounts—losses that are the result of multiplying the number of houses destroyed or damaged by the average monthly rent during the estimated rehabilitation and reconstruction period.

In each sector, indirect losses include both the volume (or units) of losses in future production of goods and services until the previous productive capacity and the price of these goods and services expressed in terms of producer prices or, in the case of services, consumer prices recover fully.

The gross amounts thus estimated are converted into value added before being incorporated into the projected GDP. To this effect, national account information relating gross values to value added for leading economic sectors and branches of activity are used. Usually, a recent input/output matrix relating these values is available.

As indicated previously, the anticipated expansion of the construction sector as a result of the rehabilitation and reconstruction plan and activities will have a positive bearing on GDP and must be estimated. In this respect, the annual growth of the sector is calculated on the basis of the known capacity of the sector and the expected amounts of investment for rehabilitation and reconstruction.

Data on sectoral-loss value added and expansion of the construction sector are superimposed on the anticipated sectoral estimates of GDP for the year in which the disaster occurs, and for subsequent years if the data are available and the type and magnitude of the disaster so warrant their inclusion.

GDP after the disaster is thus estimated. Global and sectoral economic setbacks due to the effects of the disaster can be identified easily by comparing the new

estimation of GDP and the projection made before the disaster for the same year. Trends in economic growth can be determined by comparing the newly estimated GDP and real GDP figures for previous years.

EFFECTS ON THE EXTERNAL SECTOR

The external sector of a country is affected by a natural disaster through the balance of payments current account and, in some cases, the external financial requirements of reconstruction. These effects are felt not only in the year during which the disaster occurs but also in a longer time frame that lasts until the country's productive capacity is fully restored.

The assessment process must obtain the most reliable and up-to-date information concerning the balance of payments situation for the whole economy and its projection for the year in which the disaster occurs and the following years if possible. This should be complemented with other basic data on external indebtedness, debt servicing levels, and international monetary reserves before the disaster.

The resulting current account of the balance of payments during the year of the disaster is estimated on the basis of both the envisaged account before the disaster and the following calculations based on the indirect damages for each sector affected:

- Reductions in the export of goods and services, whether due to the destruction of their means of production or their reorientation toward internal markets; losses in services occur when a country has been affected in its capacity to receive tourists, its shipping fleet, or its capacity to export engineering services.
- Increases in imports of goods required for the rehabilitation phase, including fuel and food to replace insufficient internal production as well as to supply the construction materials needed to reconstruct destroyed assets.
- Donations in kind and in cash received to attend the emergency phase.
- Insurance and reinsurance payments from abroad to cover damages and destruction of assets.
- Possible reductions in interest payments to foreign creditors that may be agreed upon as a result of the disaster; possible increases in payments related to new short-term loans requested to attend the emergency or to rehabilitate essential services immediately.

Projecting these factors allows us to determine the possible occurrence of or increase in a current account deficit in the balance of payments in the year of the disaster. Should the requirements for imports or the reduced level of exports remain for a longer time period, a chronic deficit may occur as a result of the disaster.

The resulting capital account of the balance of payments may be estimated by superimposing on the pre-disaster projection the information related to the medium- and long-term foreign financing requirements for the priority investment projects that are to be included in the reconstruction plans that will follow in the, say, five years following the disaster. It should also include the additional foreign financing required to compensate for the possibility that deterioration of the current account balance will be chronic. These additional foreign financing requirements will have to be made compatible with prior foreign debt commitments and with the country's level of international reserves. A change in the conditions governing foreign financing and debt servicing may have to be negotiated.

EFFECTS ON PUBLIC FINANCES

Using the pre-disaster fiscal budget as a base, the following secondary effects are superimposed to determine the disaster's effects on public finances:

- Reductions in tax revenue due to decreases in the production of goods and services, household income, and consumption expenditures.
- Increased current expenditures to attend the emergency phase of the disaster.
- Increased capital investments for the rehabilitation and reconstruction program.

The first two types of secondary effects are usually felt during the calendar or fiscal year of the disaster, while the increased capital investment is usually spread over a number of years.

The reductions in tax revenues are estimated as part of the sectoral evaluation of indirect damages, based on the projected production of goods and services. Further reductions in tax revenues should be estimated based on the expected reductions in household income and consumption expenditures. In some cases, governments may decide to reduce the level of taxes on exports in order to foster or expedite the recovery of production levels; these reduced tax revenues should also be entered into the equation. A similar case occurs when national or local governments cannot collect property taxes on destroyed housing and business buildings. Expenditures incurred by national governments to meet the unforeseen needs immediately following the disaster, including the provision of temporary shelter and the most immediate rehabilitation needs, should be determined during the assessment. The result is a revised current account of the fiscal budget that shows the effects of the disaster. From it, resulting fiscal deficits and the possible noncompliance with agreed upon fiscal restraint targets may be identified.

In regard to the capital investment expenditures for rehabilitation and reconstruction, a preliminary program is prepared during the damage assessment mission. The following items must be taken into consideration:

- Estimates of total investment required to rehabilitate and reconstruct infrastructure and to restore production.
- The known delivery capacity of the construction sector in the affected country or region.

An annual capital investment program for rehabilitation and reconstruction is thus prepared and then superimposed on the program envisaged before the disaster occurred. Should the new requirements constitute a sizable percentage of the capital investment envisaged under normal conditions, the country's overall investment program should be revised. Some already programmed development projects may have to be postponed or discarded, unless additional financing can be obtained. Furthermore, if the additional financing is to come from foreign sources, an additional analysis should be made concerning the balance of payments and the country's ability to maintain a higher level of debt servicing.

EFFECTS ON INFLATION

Contrary to other macroeconomic effects, the resulting impact on consumer prices cannot be quantitatively measured or estimated immediately after the disaster. A qualitative assessment can be made, however, based on the disaster-imposed short-term constraints on the local supply of manufactured goods and agricultural products, including the effect on marketing channels and transport systems. It must be borne in mind that consumer

prices may decline whenever imported products are cheaper than domestic supplies.

EFFECTS ON EMPLOYMENT

A disaster has both short- and medium-term effects on employment and household income. The short-term effects can be estimated on the basis of available data on the relations between employment and sectoral production, once the decline in sectoral production has been estimated. Work-months to be generated in the medium term by the rehabilitation and reconstruction activities can be estimated based on the existing ratio of labor requirements to level of construction investment. Both estimates must be combined to show the total effect of the disaster on this important social and economic variable.

Some conceptual considerations

Some conceptual remarks are presented here in order to examine the impact that different types of disasters have on different economies. Examples are given to portray the complex matrix that comprises the magnitude of the events, the main economic characteristics of the potentially affected country, and the alternative contexts and time frames in which a disaster may occur.

CLASSIFYING DISASTER IMPACTS

In general and on the basis of experience accumulated in the Latin American and Caribbean region, there is no predetermined pattern as to the consequences of different disasters. The resulting pattern of effects is determined by the combination of many factors, including the economic situation prevailing in the country before the event, the productive structure of the country and the extent of damages sustained, the severity of the disaster's consequences, the time of the occurrence, the very nature of the phenomenon, and, even, the way in which national authorities face the problem and relate to the international community.

Some disasters may be concentrated in a relatively limited area, affecting one specific geographical territory, massively affecting one population group, and devastating specific productive areas (see ECLAC 1973). In these cases, even though the economic and social costs may be very significant, the disaster may affect a limited number of activities and, although complete recovery tends to be a long and difficult process, reconstruction may stimulate economic growth.

Other events may affect a wider geographical area (see, for example, ECLAC 1974, 1975a, 1975b, 1976), where—at least initially—their effects and costs tend to be less evident, making it harder to rally international cooperation. An exception is where, as in Guatemala in 1976, timely damage assessment and appeal for international cooperation obtained the full backing of donors (see ECLAC 1976). In cases such as this, the disruption to economic activity is widespread, but its macroeconomic impact is less obvious. Depending on the prevailing economic and financial situation prior to the disaster, recovery from the negative impact of such a disaster can also imply a high cost and sacrifice for the country as a whole.

Major differences in impact can be observed when comparing the size and characteristics of damages with the size and complexity of the national economy affected by a disaster. A given disaster may involve very high costs in absolute terms—such as the $4.1 billion of the Mexico City earthquake—but, given the economic size of the country, reconstruction may have only modest macroeconomic effects (the

same was true in Florida in 1993 and Los Angeles in 1994).[1] By contrast, other disasters may have very high global effects on the economy even though the relative size of the damages, compared with those of other disasters, may be very small. In this respect, consider that the 1972 Managua earthquake, which in absolute terms was only a fraction of the cost of the 1985 Mexico City quake, affected 46 percent of the country's entire industrial sector. On the other side, some disasters whose total impact in dollar terms was only a fraction of that of the 1985 Mexico quake (Grenada and Antigua and Barbuda in 1975 and Guatemala in 1976) required a long time for the affected economies to recover (four years for Antigua and Barbuda, ten for Grenada, and three for Guatemala; see ECLAC 1975a, 1975b, 1976).

The damage appraisal of the Antigua and Barbuda disaster pointed out that the nature and magnitude of the damages had to be put in the context of the economic size of the country, the nature and scale of its economic functions, and the limits of its financial capabilities both in the public and private sector. At the time of the disaster, the country had a population of 70,000 inhabitants (some 17,000 households), a public sector with an annual budget of some $38 million, a productive capacity oriented mainly toward the export sector, and an economy highly dependent on tourism. The magnitude of the impact and the cost of rehabilitation and reconstruction were clearly small in absolute terms, but they represented a devastating burden for the country (ECLAC 1975b).

SOME WORKING HYPOTHESES

From another point of view, even though all major disasters have significant negative impacts, it is necessary to differentiate between disasters that have mainly economic effects and those that involve more important social consequences. For instance, Hurricane Fifi (Honduras in 1974) and other disasters (such as Grenada in 1975 and Nicaragua in 1988) had basically economic consequences but did not have major social impact such as the disruption of ample population groups; their effects were less evident in sociological terms (ECLAC 1974, 1975a, 1988). When the consequences are mostly economic, the cost of recovery may be estimated more accurately, and it is easier to prepare rapidly a portfolio of reconstruction projects that will receive attention and resources from the international donor community.

In contrast, other disasters may have more serious negative impacts on social groups than what the quantitative economic assessment would indicate (ECLAC 1979a, 1979b, 1987, 1992a, 1992b, 1993). In Nicaragua in 1979 and 1992, Ecuador in 1987, and El Salvador in 1993, assessment of the effects on macroeconomic variables did not show the full extent of social consequences. Furthermore, the relatively small absolute size of the damage also generated limited interest among both national authorities and the international community. There are many recent instances where, unfortunately, the estimated overall damage was small compared with the size of the country's economy but represented very high losses for the population affected by family disruption, loss of assets, and the virtual impossibility of recovering productive capacity on their own. Frequently these events cause dramatic damage to individuals that goes unnoticed, particularly when the population affected is concentrated in rural areas and has low income and few possibilities of presenting their plight to the authorities or potential donors.

The time frame in which a disaster occurs as well as its nature are also important. For instance, in the case of predominantly agricultural economies, the location in time when a disaster occurs within the productive cycle or season has a bearing on the amount of damages. Hurricanes, floods, and intense rainstorms that coincide with the harvest cycle (as occurred, for example, in Honduras in 1974) thus have a larger immediate impact than in cases where most of the harvest activities have been completed.

In a broader sense, the impact of a disaster depends on the country's economic trends prior to the disaster. In San Salvador in 1986, emergency and reconstruction activities were hampered by the extremely fragile financial position of the country and even more so by the costs of the prevailing military conflict. In this case, the urgency to face the crisis conflicted with other social development plans. The relatively large amount of destruction, the urgent need for reconstruction, the weakened productive capacity, and the growing financial imbalances posed serious dilemmas for economic policymakers seeking to maintain the adequate order of priorities. These dilemmas occurred, inevitably, within the small space provided by a costly armed conflict, both in social and economic terms (ECLAC 1986b).

In less dramatic although no less important cases, the urgent need to reconstruct competes at a disadvantage with stabilization and structural adjustment programs that, when coupled with financial support from international financial institutions, have strict conditionalities and macroeconomic goals. In these cases, the purely economic alternative might be to risk overheating the economy in order to respond to the economic and social demands arising from the disaster, which often have a national dimension.

Assessment of selected disasters using the ECLAC methodology

When a large-scale disaster destroys many assets in a relatively small national economy, reconstruction efforts may induce important changes in the medium- and long-term priorities of the nation and may even modify the route to development. When closely linked with the possibility of obtaining financial resources, reconstruction is limited by the country's internal productive capacity and the operational capability of its economic system. San Salvador's earthquake reconstruction program was limited by the shortage of specialized construction workers, many of whom had left the country during the internal war that preceded the disaster (see ECLAC 1986b). On the other extreme, in Guatemala following the 1976 earthquake, practically the whole country's capacity to build infrastructure was devoted to the reconstruction program, channeling all the sector's resources for more than two years into the provision of housing for the affected population (ECLAC 1976). This led to the deferment of important construction projects, including those intended to reduce the housing deficit that existed even before the disaster. In other cases, even though the total impact was not extraordinary, changes in priorities resulting from the reconstruction program induced social tensions and conflict between the need to attend to persons affected by the disaster and the need of persons who lacked the minimum living conditions even before the disaster (as occurred in Mexico in 1985; ECLAC 1985).

Analysis of selected major disasters

The following discussion summarizes the macroeconomic effects of three major disasters in the Latin American and Caribbean region, as estimated using the

ECLAC methodology and data obtained immediately after the disasters (because the type and material extent of losses can be found in other reports, only macroeconomic effects are discussed here). Some information is also summarized for other events that have affected the region since the 1970s (see tables 2-3 and 2-4).

THE 1985 MEXICO CITY EARTHQUAKE

This earthquake caused an estimated $4.3 billion in losses, of which $3.8 billion referred to direct damage and destruction to physical infrastructure and inventories and $545 million to losses in production and income (ECLAC 1985). The growth of GDP was not expected to slow as a result of indirect losses. However, the position of the external sector was expected to suffer considerably, generating a trade imbalance of $8.6 billion. This expected deterioration derived from a reduction in exports, including especially the tourism services sector, and an increase in imports of goods and services for the rehabilitation and reconstruction program and projects, in spite of an inflow of reinsurance payments. The deficit in the balance of payments was thus expected to increase more than 5 percent in the three years immediately after the disaster.

In addition, the position of public sector finances was expected to decline an estimated $1.9 billion as a result of the $2 billion in increased expenditures connected with the emergency phase, including the demolition of partially damaged structures, the removal of rubble, and the rehabilitation and reconstruction of damaged and destroyed assets. On the plus side, a net increase of $125 million in tax revenues was expected to be collected as a result of increased construction activity. The public sector deficit was thus expected, in the three years following the disaster, to increase by an average 10 percent over the previous year.

In spite of the deficit, it was thought that the required reconstruction effort could be borne without major difficulty, particularly if the expenditures involved were spread over a period of several years. Even though the loss of $4 billion in absolute terms was considerable—and of course the losses of life were irreplaceable—the value of the losses represented only 2.7 percent of the forecasted GDP for Mexico in 1985, 13.5 percent of the expected gross capital formation for the year, or 11 percent of total expenditures of the Mexican federal government.

Difficulties were nevertheless foreseen for the reconstruction efforts since the effects of the disaster could not be considered an isolated phenomenon. The earthquake occurred at a time when the Mexican economy was struggling against a particularly difficult set of circumstances: public expenditure austerity was being applied, banks were short of liquidity, and external financing restrictions were looming.

The analysis of the macroeconomic effects of the disaster was instrumental in revealing to the authorities that the cost of reconstruction, which could not be postponed, required a revision of some of the most sensitive areas of economic policy, such as public expenditure, credit policies, the price structure, and the balance of payments. Thanks to this analysis, discussions could be started to define how to face the new financial requirements while trying to maintain a stabilization program and continue servicing the public external debt.

THE 1986 SAN SALVADOR EARTHQUAKE

This disaster inflicted an estimated $940 million in damages; direct losses of capital and inventories amounted to $710 million and indirect losses to $230 million (ECLAC 1986b). Although these losses are only one-fourth of those calculated for

Table 2-4: Effects of Selected Disasters in Latin America and the Caribbean

Event	*Economic performance*	*Fiscal effects*	*Balance of payments effects*	*Infrastructure and capital losses*
Managua, 1972	GDP fell 15% overall and 46% in industrial and productive activity in Managua	Tax revenue fell 39%	Sixfold increase in current account deficit: reduction of almost 20% in exports and increase of almost 20% in imports due to extraordinary needs	Capital losses and lost production amounted to a sevenfold increase in investment requirements in fixed capital, both private and public
Honduras, 1974	GDP fell 6%overall and 23%in agriculture	Fiscal deficit grew 79% due to a decrease in current tax revenues of 15% and an increase in expenditures of 65%	Threefold increase in the current account deficit; imports grew 61%, and exports fell 66%	Loss of national assets and decrease in production represented almost twice the average annual investment
Antigua and Barbuda, 1974	GDP fell 12%, especially in oil refining, which fell 30%, tourism, basic services, and housing	Fiscal deficit increased 3 times	Balance of payments deficit increased 4 times	Damages to infrastructure represented around 4 times the average national investment
Grenada, 1975	GDP fell more than 20%; 10 years are needed to reach full agricultural production in plantations	Fiscal deficit increased more than 60%	External imbalance grew 4 times	Capital losses and damage to infrastructure amounted to 5 times the average annual investment
Dominican Republic, 1979	GDP fell 8%	Fiscal deficit increased 8 times	External deficit increased 27%	Capital assets lost twice the average of yearly investment
El Salvador, 1982	GDP fell 2%	Fiscal deficit increased 30%	External deficit grew 25%	Losses of capital and infrastructure equivalent to average investment in one year
Ecuador, 1982–83[a]	GDP fell almost 3%	Fiscal deficit increased 20%	Balance of payments deficit increased 22%	Capital and infrastructure losses equivalent to 3 years of domestic investment
Bolivia, 1982–83[a]	GDP fell 10%, 55% in agricultural sector	Fiscal deficit increased more than 275%	External sector imbalance grew 30%	Total losses were estimated at $836.5 million
Peru, 1982–83[a]	GDP fell 5%	Fiscal deficit increased 33%	Current account deficit in balance of payments increased 30%	Total losses were estimated at $2.0 billion
Mexico, 1985	GDP fell 2.7%	Fiscal deficit increased 7%	Balance of payments effect was negligible	Total losses were estimated at $4.1 billion
Nicaragua, 1988	GDP fell 2%, 17% in the agricultural sector	Fiscal deficit increased 20%	Balance of payments deficit increased 10%	Total damages estimated at $839 million
Nicaragua, 1992 Cerro Negro (volcanic activity)	GDP fell less than 1%	Less than 10% increase in fiscal deficit	Balance of payments deficit increased 2%	Total damages estimated at $19 million
Ttsunami	GDP fell almost 1%	Fiscal deficit increased an additional 5%	Balance of payments deficit increased 24%	Total losses estimated at $25 million

a. Estimated for 1983.
Source: ECLAC, on the basis of studies conducted in the field in each case.

the Mexican case, they had a much larger economic impact because they represented nearly 24 percent of GDP and about 40 percent of the national foreign debt at the time. Furthermore, the secondary effects on the macroeconomic aggregates were expected to be felt for several years after the disaster. The expected growth rate of GDP was expected to fall 2 percent in the year of the disaster due to decreased production in the sectors of commerce and industry. Public sector finances were foreseen to be severely affected by an estimated $935 million in the five years following the disaster, including an increase of $975 million in public outlays to face the requirements of the emergency, rehabilitation, and reconstruction phases, despite a net increase of $40 million in tax revenues. This meant a net increase of 24 percent in the public sector deficit.

For that five-year period, the external sector position was expected to deteriorate by $350 million as a result of increased imports for rehabilitation and reconstruction ($450 million), despite disaster-related reinsurance payments and relief assistance. The net anticipated result was to nearly double the current account balance of payments deficit. Shortages in construction materials combined with the increased demand for rehabilitation and reconstruction were anticipated to affect consumer prices, resulting in annual inflation rates above values for the previous years.

The San Salvador earthquake had a very negative effect on the main macroeconomic aggregates of the country, which lacked the capacity to face the challenges of reconstruction while facing the preexisting social problems, such as housing shortages and high unemployment rates. In view of that, the El Salvadoran government decided to elicit international cooperation—both financial and technical—to support the rehabilitation and reconstruction program.

THE 1987 EARTHQUAKE IN ECUADOR

This earthquake imposed an estimated $1 billion in damages. Direct losses represented $185 million; indirect losses represented $815 million (ECLAC 1987). The total estimated losses were significant, constituting approximately one-tenth of GDP at that time. However, indirect damages were more important, since anticipated production losses amounted to 7 percent of GDP and 33 percent of expected exports for 1987. GDP in 1987 was expected to decrease 2.7 percent—instead of growing 2.8 percent as estimated prior to the disaster—as a result of a 37 percent decline in value added due almost exclusively to declines in the oil-production sector. Minor reductions in the agricultural and domestic trade sectors were also foreseen.

The economy's external sector was expected to suffer an important negative impact. The balance of payments was expected to experience a drop of $554 million in the export of crude oil and by-products and an increase in imported goods worth $135 million to meet internal demand for fuel and to initiate the reconstruction of damaged infrastructure. A further $20 million were required to transport foreign crude oil acquired or borrowed from friendly nations in order to comply with sales contracted in the international market.

Furthermore, the position of public sector finances was expected to worsen. Public expenditures to meet rehabilitation and reconstruction requirements were expected to increase, and current income from the export of oil products and tax revenues from decreased economic activities were expected to decline. Before the quake, the fiscal deficit was expected to decrease, when compared with 1986;

after the disaster, it was predicted to increase nearly 40 percent.

The analysis conducted revealed the vulnerability of the oil-producing and export activities of Ecuador's economy, at a time when the government was making important but still not totally successful efforts to stabilize it. The analysis also revealed that the country's capacity to undertake by itself the investment needed for reconstruction was seriously compromised by the earthquake's anticipated effects on both the finances of the public sector and the position of the external sector. It could be foreseen, however, that due to the nature and relatively limited amount of damage done to infrastructure, reconstruction and restoration of the country's production and export capacities could be achieved with relative ease, if international cooperation could be obtained on a timely basis.

The long-term impact of disasters

Disasters significantly and negatively affect the prospects of long-term development of most of the Latin American and Caribbean countries. Countries having relatively small economies suffer those effects for a particularly long period of time. The speed with which the international community assists countries affected by natural disasters also has a bearing on the duration of the recovery period.

Impact on development prospects

A first consequence of a disaster is the immediate decline in national average living conditions; this effect is naturally more concentrated on the population living in the area directly affected by the disaster. In addition to losses due to damaged infrastructure and to the provision of public services, personal and family assets are also destroyed. Such is the case of housing and household and personal effects, which may not be replaced for several years. In the interim, the allocation of private and public resources may have a positive—albeit temporary—effect on the growth of GDP. The increased investment, insofar as it is destined for reconstruction, merely replaces a portion of lost capital. Replacement often reduces well-being from the level prevailing prior to the disaster.

Twenty years after, the effects of the Managua earthquake can still be seen in the precarious urban conformation of the destroyed capital city (see ECLAC 1973). Due to the nature of that earthquake, its effects were felt by the total population of Managua, the capital. Some low- and middle-income groups were affected particularly severely because their housing units were not built to resist earthquakes.

In other cases, the manner in which reconstruction programs were designed and undertaken further aggravated the already unequal distribution of wealth and did not permit the well-being of the population most directly affected to be restored (see ECLAC 1976). Still in other cases, disasters modified the very pattern of development because they affected key sectors of the economy. Consider the case of Peru, which in both the 1972–73 and the 1982–83 occurrences of the El Niño phenomenon suffered important setbacks in its fishing and related industries, when some of the fish varieties virtually disappeared from the Pacific coastal areas. The direct impact on the fishermen and the negative consequences for the export sector were very high (see ECLAC 1983b).

Impact on economic performance

Long-term macroeconomic effects are expressed in terms of a number of significant variables that signify a reduction of

per capita income. The Latin American and Caribbean experience confirms the hypothesis developed by researcher Ken Sudo, who has drawn an interesting correlation between GDP per capita and the number of disasters a year (see Sudo 1994). The absolute dimension of a disaster and the context in which it occurs (size and characteristics of the economy affected) also have a bearing on its long-term impact. The 1985 earthquake in Mexico did not have noticeable long-term negative effects on the country's macroeconomic variables—in part due to timely corrections of economic policy—even though eight years after its occurrence, a small number of the affected population still lacks permanent housing. On the other hand, the long-term effects of the disasters in Nicaragua in 1972, Guatemala in 1976, and El Salvador in 1986 are still being felt.

In addition to the macroeconomic impacts mentioned above, some specific long-term effects can be seen and measured over the years. These specific areas include the destruction of economic infrastructure, imbalances in the external sector, extraordinary fiscal imbalances, and inflation.

Destruction of Economic Infrastructure

Even though damage to and destruction of infrastructure occur immediately after a disaster and have a short-term impact, full replacement of these losses requires a relatively long period of time in most cases. During that time, the economy—and the most affected sectors especially—functions in a distorted fashion. Reconstruction of lost infrastructure thus tends to slow the rate of growth and development. Some concrete examples of the long-term impact of the destruction of infrastructure include highways and agriculture, in the case of Hurricane Fifi in Honduras, electricity services in San Salvador, and marine resources in Nicaragua and Peru.

External Sector Imbalances

Although these imbalances occur in the short term, they increase the economy's indebtedness and place an additional burden on its service profile, which affects the future capacity of the government to assign resources to investment and social expenditure in the long term. In this case, the experience of Latin America and the Caribbean confirms Sudo's analysis (for example, Guatemala in 1976, El Salvador in 1986, and Peru, Bolivia, and Ecuador in 1982).

Extraordinary Fiscal Imbalances

Short-term fiscal imbalances occur because special budgetary allocations are needed to undertake unexpected emergency and immediate rehabilitation following a disaster. These imbalances may persist in the medium term because direct and indirect economic effects of the disaster cause fiscal revenues to fall. Over time and gradually, these imbalances affect the government's capacity to sustain or improve its specific activities and to provide quality public services. This is evident particularly in social services such as education and health. Furthermore, a worsening of an existing fiscal imbalance may have repercussions for existing financial adjustment arrangements with international lending institutions that involve conditionalities.

Inflationary Processes

The immediate effects on prices that are the result of market disorders due to a disaster are compounded by the monetary effects associated with the reconstruction expenses undertaken with donated resources or external financing. In addition, fiscal deficits tend to have an inflationary effect in cases where fiscal

and monetary policies and controls do not address these matters. Added to this short- and medium-term inflation, insofar as damages to infrastructure cause an increase in production costs, further price increases occur that affect the functioning of the economy as a whole. Thus, reconstruction—when of significant size in relation to the economy—may overheat the overall economy. In some instances, this effect may be incompatible with the country's stabilization and structural adjustment efforts. These inflationary processes weaken the country's capacity to grow and invest, further deteriorate income distribution profiles, and exacerbate poverty.

Effects on institutional arrangements

Major disasters may affect the institutional arrangements in the affected country. To facilitate responses to the event, emergency committees are normally established to identify the most pressing needs and to channel aid. At a later stage, institutions may be set up—usually in the form of special reconstruction committees—as parallel structures to existing public administration ministries or bodies in the field. These new institutions are intended to expedite action, uninhibited by certain administrative and bureaucratic rigidities in the "normal" public apparatus, in matters such as purchasing and allocation of resources. Such institutions—created to attend a specific reconstruction program—tend to perpetuate themselves (the case of Guatemala comes to mind), duplicating functions and tapping scarce resources. Such institutions, however, sometimes develop an effective capacity for identifying and executing projects and improve the government's ability to channel and use international cooperation fruitfully. This is particularly true in countries with weak organizational structures. These institutions also help to assure donors that their resources are used adequately and without bias. Although in many cases this may not lead to the establishment of a national or regional institution for the prevention of disasters, these institutional arrangements for tackling reconstruction after disasters help some countries to face new disasters.

Because of the frequent occurrence of disasters in Latin America and the Caribbean and the repetition of errors and mistakes in reacting to them, temporary institutional arrangements set up in the wake of one disaster sometimes become permanent structures that conduct risk analysis and define plans on how to react to potential disasters. They may also disseminate experiences and educate the population about measures that can be taken, on a preventive basis, to reduce risks and, once a disaster occurs, to react in an orderly and coordinated way when reconstruction begins. This implies a sustained education effort that includes educational and training programs, modified zoning and construction codes, and so forth.

Implications for the international donor community

In the Latin American and Caribbean region, ECLAC frequently undertakes, immediately following a major disaster and at the request of the affected country, a comprehensive damage assessment. This assessment evaluates the direct and indirect costs involved, identifies the sectors that require priority attention in the rehabilitation and reconstruction phase, and analyzes the macroeconomic effects of the disaster. The assessment is prepared in a relatively short period of time—usually within four to six weeks of the disaster—and provides the means with which

to determine the ability of the affected country to face by itself the requirements of rehabilitation and reconstruction. The document is also a tool with which the international donor community can orient its technical and financial cooperation, specifically the substantive contents of aid and the conditions concerning interest rates and repayment periods (recently, the ECLAC member states issued a mandate to the Secretariat to undertake this type of damage assessment on a systematic basis; see the resolution adopted by ECLAC during its twenty-fifth period of sessions—Cartagena, April 20–27, 1994—which is presented in appendix 2-1).

Although resources to attend the most pressing needs of the emergency phase are usually available through internal budgetary reallocations and the generous and timely assistance of the international community (both international organizations and donor governments), the rehabilitation and reconstruction programs following major disasters require sizable fresh resources under soft terms. The urgency with which these new resources are needed requires that the international donor community make special efforts. Important steps have been taken in recent years as a result of major disasters in Latin America, the Caribbean, and elsewhere. They include the ability to reorient existing development loans, more flexible requirements for formulating projects, and quicker processing of requests for loans. However, further work may be necessary if the international donor community is to help developing countries face reconstruction and tackle prevention and mitigation activities.

In this respect, the international donor community should bear in mind that cooperation on rehabilitation and reconstruction should be in addition to the normal development cooperation already approved or earmarked for the affected country. Only in this fashion can developing countries seek to solve long-standing social problems that are aggravated by a major disaster. The flexibility to reorient existing loans certainly allows countries to address promptly the unexpected problems generated by a disaster but may also postpone or even cancel the execution of other much needed development programs and projects. International lending organizations and even donor governments through their bilateral cooperation programs may wish to consider establishing special programs designed exclusively to provide fresh, additional resources to finance unexpected rehabilitation and reconstruction plans after major disasters.

The international community may also wish to relax its normal institutional counterpart requirements for development assistance, by accepting—in the case of disasters—that the rehabilitation and reconstruction loans or grants be channeled through national institutions—including nongovernmental organizations—specifically set up for this task, instead of through the ministry or other public sector organization that would usually execute development loans and projects. This flexibility would ensure a faster response and still provide adequate assurances. A prerequisite may be that these resources be kept apart from the public administration's regular budget to ensure direct accountability.

In cases where the disaster is of significant magnitude but its impact is minor in relation to the size of the national economy, the government may wish to make full use of available domestic credit and financial resources before requesting external cooperation. The international donor community should be prepared to reinforce these domestic efforts.

The international donor community should also consider carefully the situation of a country seeking cooperation for rehabilitation and reconstruction following a disaster whose financial position is limited by an adjustment and stabilization program. Such a country may have accepted conditionalities related to its monetary, fiscal, and external financing policies, and these may block the need to expand liquidity and thus mobilize the resources needed to face emergency, rehabilitation, and reconstruction. In these cases, international lending institutions should be prepared to accept the affected government's request for flexibility in the fulfillment of those goals and conditionalities. Failure to do so may mean that sufficient fiscal resources are not assigned to the most pressing needs of the population during the emergency phase and, worse still, that social unrest emerges when reconstruction needs are not met.

Given the experience in the Latin American and Caribbean region and the frequency and intensity of disasters that affect it, the international donor community should provide more flexible mechanisms to facilitate the flow of cooperation for financing emergency and reconstruction. Lack of such mechanisms will result in greater medium- and long-term social and economic costs for the countries affected by disasters. Their unmet needs and damaged infrastructure will affect the functioning of the economy, slow economic growth, compromise the achievement of goals set forth in stabilization programs, and hinder overall development.

Summary and conclusions

The experience of Latin America and the Caribbean shows a significant increase in the frequency and complexity of disasters, with a growing incidence of quasi-natural and social disasters. The pattern of disasters is unpredictable, making it difficult to measure the long-term consequences of a disaster, because several variables related to the event itself interact in complex ways, affecting the economy, the country's relations with the international community, and the conditions prevailing when the disaster strikes.

Advances have been made in the ability to assess damages and organize actions for the emergency, rehabilitation, and reconstruction phases. In the experience accumulated by ECLAC, the diverse variables and a methodology have been developed and made systematic and can be applied in general to all disasters. Unfortunately, no major advances nor sustained efforts have been made to develop the capacity to predict and prevent disasters, even those caused by phenomena that are cyclical or repetitive in nature.

In most disasters, the economic evaluation of their immediate and short-term impact, although complex, may be feasible. The consequences, particularly the social impact over a long time frame, are harder to measure and project. Regarding the effect of a disaster on a country's long-term prospects for economic and social development, the nature and size of the phenomenon tend to be in inverse relation to the size of the affected economy: the larger the disaster and the smaller the economy, the more significant the impact.

The economic effects of disasters include, among others,

- A negative impact on development prospects that not only immediately downgrades living conditions, especially of the population most directly affected, and temporarily defers or

cancels development plans that seek to address long-standing social needs, but that also modifies the very production patterns of developing economies when key productive sectors are affected.

- A deterioration of economic performance, which can be measured in terms of short-term reductions in the growth of GDP and per capita income; when productive activities are affected, the result is both short- and long-term imbalances in the external sector.
- Imbalances in the fiscal budget, because fiscal resources are reallocated to meet the urgent and unexpected emergency requirements, fiscal revenues decline, and conflicts arise in the need to fulfill commitments the country may have made to adjustment loan conditionality.
- Immediate and medium-term inflationary pressures stemming both from market disorders that occur right after the disaster and from the monetary effects associated with reconstruction expenditures undertaken with external financing and donations.

These consequences of disasters for developing economies also have implications for the international community, which is called to assist affected countries in the following ways:

- Continuing to offer international assistance to developing countries whose domestic fiscal resources are insufficient to meet the urgent requirements of the emergency stage immediately following a disaster.
- Assigning priority to disaster prevention and mitigation cooperation plans and projects from developing countries that result in diminished rehabilitation and reconstruction needs when future disasters occur.
- Making the already accepted scheme of reorienting existing sectoral loans and loan application requirements more flexible to attend unexpected needs.
- Making additional fresh resources—perhaps through the creation of a special fund—available to meet rehabilitation and reconstruction needs arising from disasters and to avoid the deferment or cancellation of other much-needed development projects; this special fund would involve soft terms for interest rates and repayment periods to avoid compromising the developing country's limited capacity to repay.
- Accepting temporary noncompliance by developing countries of adjustment and stabilization loan conditionalities related to fiscal austerity, when outlays required by rehabilitation and reconstruction modify their fiscal budget situation.
- Reinforcing rehabilitation and reconstruction financing when affected governments—following disasters having limited macroeconomic effects—elect to resort to domestic credit and financial resources.
- Making institutional counterpart requirements more flexible for rehabilitation and reconstruction financing by accepting that resources may be channeled through national institutions—including nongovernmental organizations—especially established for the purpose, as opposed to the normally accepted government ministries or decentralized institutions.

Note

1. A billion is 1,000 million.

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Appendix 2-1. Resolution on Economics and Natural Disasters: Twenty-Fifth Session, Cartagena de Indias, Colombia, April 20–27, 1994



The Economic Commission for Latin America and the Caribbean

Considering that the Latin American and Caribbean region is frequently affected by natural disasters of diverse origin and intensity, adversely affecting the economic development of the countries and the living conditions of the population,

Taking into account that preliminary estimates made by ECLAC show that annual losses caused by natural disasters in the countries of Latin America and the Caribbean exceeded 1.5 billion dollars,

Considering also that it is possible to reduce these losses to less significant amounts through the identification and implementation of preventive measures and mitigation actions that require important investment resources which, nevertheless, are at only a fraction of the level of losses estimated at present,

Further taking into account that although ECLAC has developed methodologies to estimate the economic effects of disasters, the region does not account with the necessary quantitative arguments to enable competent authorities the prompt adoption of investment policies geared to the prevention and mitigation of disasters.

1. *Decide* to request that the ECLAC Secretariat:

a) Undertakes the systematic research and pertinent quantitative analysis to determine, as soon as possible, the total economic effects of disasters in the countries of the region as well as their reduction to smaller levels through the undertaking of actions to prevent and mitigate them;

b) Presents the governments of the region concrete proposals for the introduction of the issue of disaster prevention and mitigation in national development plans, as part of the efforts being carried out during the International Decade for the Reduction of Natural Disasters; and

2. *Recommends* that the Secretariat seeks and obtains additional extra-budgetary resources in order to carry out these tasks.

Appendix 2-2: Map Showing the Location of Selected Disasters



The Context of Disasters and Sustainable Development: Case Studies of a Growing City and Urban-Rural Linkages in Bangladesh

Atiq Rahman

Natural disasters threaten sustainable development worldwide, and the need for integrating natural disaster into the conventional development process is paramount. Natural disasters often destabilize communities, ecosystems, and production bases and make them more vulnerable to additional shocks such as other disasters and economic or political instability. The response of poor societies to natural disasters is often complex. It depends on many factors, including the type and intensity of the disaster, disaster preparedness, and the institutional support system—both formal and informal. Poorer societies, even if initially resilient, are often destablized by natural disasters to the extent that their sustainability is completely undermined.

More detailed case studies would be helpful in improving countries' efforts to make disaster reduction an integral part of development planning. Presently, there is only a relatively small body of knowledge about the complex interplay between disasters and sustainable development. New case studies are needed to explore and analyze the linkages between natural disasters and sustainable development in two settings: a megacity with rapid population growth, like Dhaka City, which is one of the fastest growing cities in South Asia; and a metropolis in a more regional setting, such as the coastal city of Chittagong and its adjoining areas, which were badly affected by a major cyclone in April 1991. Outlined below are the issues that such studies would help to illuminate.

Bangladesh: The setting and the disaster

Bangladesh is faced with rampant poverty, high population density, increasing population, recurring natural disasters, and a dwindling base of natural resources. Furthermore, there are geomorphological and political instabilities, a high level of dependence on external aid in the economy, and democracies and democratic institutions in the early stages of formation.

More than 5 percent of the gross domestic product (GDP) is lost annually to recurrent natural disasters. Recurrent floods cover large areas, often up to 30 percent of the country. They affect and damage crops, seeds, trees, livestock, housing, infrastructure, and the economic and productive units in the formal and informal sector both in urban and rural regions. Floods can enhance erosion by rivers, with a consequent loss of valuable arable lands and increased vulnerability of affected communities. Areas hit by cyclones are not very large, but the devastation can be enormous: the cyclone of April 1991 killed more than 130,000 people. In the recent cyclone of May 1994, casualties fortunately were limited to 200, but calculated damages exceed hundreds of million of dollars, which the country can ill afford.

The northwest part of Bangladesh is vulnerable to drought and the northeast to flash floods. The country is on a zone of low-scale tectonic activity. Exogenous factors such as changes in global climate and the consequential rise in sea level threaten the coastal communities, home to more than 15 percent of 120 million people. A recent study on the vulnerability to climate change and rise in sea level predicted that coastal inundation of the south and increasing drought in the northwest will have devastating economic and environmental impacts. The stark conclusion is that if the predicted impacts of changes in global climate are true, and if neighbors refuse to cooperate on making water from common rivers available (for example, the sharing of the Ganges water with India), then all the development efforts for the next thirty years will be totally negated by exogenous factors for which the people of Bangladesh are not responsible. Sustainable economic development will continue to be a farfetched goal. Furthermore, the greatest disaster is the existing poverty, which undermines the basis for sustainable development.

A proposed study on these issues would analyze historic disasters and their economic costs, different disaster scenarios, disaster management concepts, and institutionalized responses. This study would also analyze the different phases of disasters and their comparative costs and benefits and demonstrate the linkages between economic activities and natural disasters and their relevance to sustainable development.

Case studies

As mentioned above, two detailed case studies—one looking at a mega-city and the other at urban-rural linkages—would provide a more accurate view of the country's vulnerability to disasters and sustainability. Although urban centers are focal points of enhanced economic activity, particularly in the industrial and formal sectors, disaster analysis should not treat them in isolation because urban-rural linkages are multifaceted and intense.

The urban case study: Dhaka City

Dhaka, the capital of Bangladesh, is one of the fastest growing Asian cities, with an annual population growth rate of more than 6 percent. Dhaka had a population of 6.1 million in 1991, which will have increased to 11.2 million by the year 2000. The average background population growth rate is around 2.2 percent, migration from rural areas accounts for the rest. The dominant push factors are landlessness and poverty, and the major pull factors are some, albeit precarious, employment opportunities and the potential to form slums with little or no sanitary and infrastructure support. The lowest strata in society, as in most mega-cities, live on the wastes of the affluent.

The major recent natural disasters were floods in 1987 and 1988. Part of the reason for the massive economic devastation and impact was excess water from outside, but the dominant reason was waterlogging caused by poor planning and by so-called protection plans for the construction of embankments. These embankments, and the choking of drains by rampant and ill-conceived construction, make the city and its dwellers more vulnerable to flooding.

Other disasters are typhoons—short, sharp events—which can be devastating, particularly if they hit infrastructure of economic importance such as industries, power plants, and bridges. Fire hazards also remain a major threat because of the population congestion and poor housing. Again, the poor are the most vulnerable.

The proposed case study would analyze in detail the economic effect of disasters and their preferential impact on different economic sectors such as industry, transport and roads, buildings, waterways, health and sanitation, power, and institutions. The study would also explore the impacts of disasters on different social classes and their responses, illustrating the vulnerability of the poor to natural disasters and the ways in which the elite distort planning priorities and influence decisions that are ultimately socioeconomically suboptimal for the city and the country.

Urban-rural linkages: Cyclone of April 1991

The coastal areas of Bangladesh were devastated by a cyclone in April 1991. The victims of the cyclone and associated water surge were not only the 130,000 who lost their lives and the millions marooned and disabled, but all components of the economy—human beings, animals, trees, soil, bodies of water, infrastructure, and commercial products such as shrimp, salt, and textiles. A recent study has shown that the Port of Chittagong alone sustained a loss of Tk1,616 million ($400 million). Some twenty-two vessels sank, including a port dredger and a floating crane. The airport was severely damaged, as were forty-three major industries in the Export Promotion Zone. An estimated Tk10 billion ($2.4 billion) of plant was damaged in the export sector alone. This is equivalent to the nation's total annual development budget. Several offshore islands were totally devastated: 75 percent of the houses and 65 percent of the schools in Sandwip Island were wiped away.

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(continued)

A case study of this experience would systematically analyze peoples' reaction to disasters, economic losses, and management strategies: what has worked, what has not, and how people cope with such disasters. However, the dominant conclusion remains that the more effective participation of the people is the best approach to improving disaster management and mitigation. Preparedness is the essence of reducing the impact of disasters and achieving economic development overall. While disasters themselves inflict great harm, the greatest killers are underdevelopment and poverty.

Conclusions

Floods, cyclones, tidal bores, and earthquakes are not the only disasters: poverty and illiteracy are more deadly, and they also are barriers to better disaster management. Forward planning to cope with exogenous and extended phenomena such as global warming and a rise in sea level tend to be embedded in economic activities in an intricate and interconnected world, where often the poor states, and even poorer communities, are most vulnerable. The poor are pushed toward the disaster-prone and environmentally degraded areas, making them even more vulnerable, and locking them into an economic and ecological downward spiral.

Development is the greatest antidote to disaster. Proper economic growth offers the best opportunities, and only effective participation of the populace in this decisionmaking can make economic-ecological sustainability possible. The deadly triad of population growth, natural disasters, and environmental degradation can only be addressed with the emerging tools of sustainable development and economic opportunities for the people, particularly the poor.

Annex 518

"Responsibility and Liability under International Law for Environmental Damage", Session of Strasbourg, *Institut de Droit International,* 1997

JUSTITIA ET PACE
INSTITUT DE DROIT INTERNATIONAL

Session of Strasbourg - 1997

Responsibility and Liability under International Law for Environmental Damage

(Eighth Commission, Rapporteur : Mr Francisco Orrego Vicuña)

(The English text is authoritative. The French text is a translation.)

The Institute of International Law,

Recalling the "Declaration on a Programme of Action on the Protection of the Global Environment" adopted at the 65th Session of the Institute in Basle ;

Mindful of the increasing activities that entail risks of environmental damage with transboundary and global impacts ;

Taking into account the evolving principles and criteria governing State responsibility, responsibility for harm alone and civil liability for environmental damage under both international and national law ;

Noting in particular Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration on the responsibility of States to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction ;

Realizing that both responsibility and liability have in addition to the traditional role of ensuring restoration and compensation that of enhancing prevention of environmental damage ;

Seeking to identify, harmonize and to the necessary extent develop the principles of international law applicable to responsibility and liability in the context of environmental damage ;

Desiring to make useful recommendations for the negotiation and management of regimes on responsibility and liability for environmental damage established under international conventions in furtherance of the objectives of adequate environmental protection (environmental regimes) ;

Realizing that international environmental law is developing significant new links with the concepts of intergenerational equity, the precautionary approach, sustainable development, environmental security and with human rights law, as well as with the principle of shared but differentiated responsibility, thereby also influencing the issues relating to responsibility and liability ;

Adopts this Resolution :

Basic Distinction on Responsibility and Liability

Article 1

The breach of an obligation of environmental protection established under international law engages responsibility of the State (international responsibility), entailing as a consequence the obligation to reestablish the original position or to pay compensation.

The latter obligation may also arise from a rule of international law providing for strict responsibility on the basis of harm or injury alone, particularly in case of ultra-hazardous activities (responsibility for harm alone).

Civil liability of operators can be engaged under domestic law or the governing rules of international law regardless of the lawfulness of the activity concerned if it results in environmental damage.

The foregoing is without prejudice to the question of criminal responsibility of natural or juridical persons.

Article 2

Without precluding the application of rules of general international law, environmental regimes should include specific rules on responsibility and liability in order to ensure their effectiveness in terms of both encouraging prevention and providing for restoration and compensation. The object and purpose of each regime should be taken into account in establishing the extent of such rules.

International Responsibility

Article 3

The principles of international law governing international responsibility also apply to obligations relating to environmental protection.

When due diligence is utilized as a test for engaging responsibility it is appropriate that it be measured in accordance with objective standards relating to the conduct to be expected from a good government and detached from subjectivity. Generally accepted international rules and standards further provide an objective measurement for the due diligence test.

Responsibility for Harm Alone

Article 4

The rules of international law may also provide for the engagement of strict responsibility of the State on the basis of harm or injury alone. This type of responsibility is most appropriate in case of ultra-hazardous activities, and activities entailing risk or having other similar characteristics.

Failure of the State to enact appropriate rules and controls in accordance with environmental regimes, even if not amounting as such to a breach of an obligation, may result in its responsibility if harm ensues as a consequence, including damage caused by operators within its jurisdiction or control.

The use of methods facilitating the proof required to substantiate a claim for environmental damage should be considered under such regimes.

Civil Liability

Article 5

While fault-based, strict and absolute standards of civil liability are provided for under national legislation, environmental regimes should prefer the strict liability of operators as the normal standard applicable under such regimes, thereby relying on the objective fact of harm and also allowing for the appropriate exceptions and limits to liability. This is without prejudice to the role of harmonization of national laws and the application in this context of the standards generally prevailing under such national legislation.

Article 6

Environmental regimes should normally assign primary liability to operators. States engaged in activities *qua* operators are governed by this rule.

This is without prejudice to the questions relating to international responsibility which may be incurred for failure of the State to comply with the obligation to establish and implement civil liability mechanisms under national law, including insurance schemes, compensation funds and other remedies and safeguards, as provided for under such regimes.

An operator fully complying with applicable domestic rules and standards and government controls may be exempted from liability in case of environmental damage under environmental regimes. In such case the rules set out above on international responsibility and responsibility for harm alone may apply.

Article 7

A causal nexus between the activity undertaken and the ensuing damage shall normally be required under environmental regimes. This is without prejudice to the establishment of presumptions of causality relating to hazardous activities or cumulative damage or long-standing damages not attributable to a single entity but to a sector or type of activity.

Article 8

Subsidiary State liability, contributions by the State to international funds and other forms of State participation in compensation schemes should be considered under environmental regimes as a back-up system of liability in case that the operator who is primarily liable is unable to pay the required compensation. This does not prejudice the question of the State obtaining reimbursement from operators under its domestic law.

Limits to Responsibility for Harm Alone and Civil Liability

Article 9

In accordance with the evolving rules of international law it is appropriate for environmental regimes to permit for reasonable limits to the amount of compensation resulting from responsibility for harm alone and civil liability, bearing in mind both the objective of achieving effective environmental protection and ensuring adequate reparation of damage and the need to avoid discouragement of investments. Limits so established should be periodically reviewed.

Insurance

Article 10

States should ensure that operators have adequate financial capacity to pay possible compensation resulting from liability and are required to make arrangements for adequate insurance and other financial security, taking into account the requirements of their respective domestic laws. Where insurance coverage is not available or is inadequate, the establishment of national insurance funds for this purpose should be considered. Foreseeability of damage in general terms of risk should not affect the availability of insurance.

Apportionment of Liability
Article 11

Apportionment of liability under environmental regimes should include all entities that legitimately may be required to participate in the payment of compensation so as to ensure full reparation of damage. To this end, in addition to primary and subsidiary liability, forms of several and joint liability should also be considered particularly in the light of the operations of major international consortia.

Such regimes should also provide for product liability to the extent applicable so as to reach the entity ultimately liable for pollution or other forms of environmental damage.

Collective Reparation
Article 12

Should the source of environmental damage be unidentified or compensation be unavailable from the entity liable or other back-up sources, environmental regimes should ensure that the damage does not remain uncompensated and may consider the intervention of special compensation funds or other mechanisms of collective reparation, or the establishment of such mechanisms where necessary.

Entities engaged in activities likely to produce environmental damage of the kind envisaged under a given regime may be required to contribute to a special fund or another mechanism of collective reparation established under such regime.

Preventive Mechanisms Associated with Responsibility and Liability
Article 13

Environmental regimes should consider the appropriate connections between the preventive function of responsibility and liability and other preventive mechanisms such as notification and consultation, regular exchange of information and the increased utilization of environmental impact assessments. The implications of the precautionary principle, the "polluter pays" principle and the principle of common but differentiated responsibility in the context of responsibility and liability should also be considered under such regimes.

Response Action
Article 14

Environmental regimes should provide for additional mechanisms which ensure that operators shall undertake timely and effective response action, including preparation of the necessary contingency plans and appropriate restoration measures directed to prevent further damage and to control, reduce and eliminate damage already caused.

Response action and restoration should be undertaken also to the extent necessary by States, technical bodies established under such regimes, and by private entities other than the operator in case of emergency.

Article 15

The failure to comply with the obligations on response action and restoration should engage civil liability of operators, the operation of back-up liability mechanisms and possible international responsibility. Compliance with the obligations should not preclude responsibility for harm alone or civil liability for the ensuring damage except to the extent that it has eliminated or significantly reduced such damage.

Article 16

States and other entities undertaking response action and restoration are entitled to be reimbursed by the entity liable for the costs incurred as a consequence of the discharge of these obligations. While claims for these costs can be made independently of responsibility for harm alone or civil liability, they may also be consolidated with other claims for compensation for environmental damage.

Activities Engaging Responsibility for Harm Alone or Strict Civil Liability

Article 17

Environmental regimes should define such environmentally hazardous activities that may engage responsibility for harm alone or strict civil liability, taking into account the nature of the risk involved and the financial implications of such definition.

Specific sectors of activity, lists of dangerous substances and activities, or activities undertaken in special sensitive areas may be included in this definition.

Article 18

If more than one liability regime applies to a given activity, the regime prepared later in time should provide criteria to establish an order of priority. The standard most favorable to the environment or for the compensation of the victim should be adopted for this purpose.

Degree of Damage

Article 19

Environmental regimes should provide for the reparation and compensation of damage in all circumstances involving the breach of an obligation. In the case of a regime providing for responsibility for harm alone, the threshold above which damage must be compensated must be clearly established.

Article 20

The submission of a given proposed activity to environmental impact assessment under environmental regimes does not in itself exempt from responsibility for harm alone or civil liability if the assessed impact exceeds the limit judged acceptable. An environmental impact assessment may require that a specific guarantee be given for adequate compensation should the case arise.

Exemptions from Responsibility and Civil Liability

Article 21

Exemptions from international responsibility are governed by the principles and rules of international law. Environmental regimes may provide for exemptions from responsibility for harm alone or civil liability, as the case may be, to the extent compatible with their objectives. The mere unforeseeable character of an impact should not be accepted in itself as an exemption.

Article 22

Without prejudice to the rules of international law governing armed conflicts, such an event as well as terrorism and a natural disaster of an irresistible character and other similar situations normally provided for under civil liability conventions may be considered as acceptable exemptions in environmental regimes, subject to the principle that no one can benefit from his or her own wrongful act.

Intentional or grossly negligent acts or omissions of a third party shall also normally be an acceptable exemption, but the third party should in such case be fully liable for the damage. Damage resulting from humanitarian activities may be exempted from liability if the circumstances so warrant.

Compensation and Reparation of Damage

Article 23

Environmental regimes should provide for the reparation of damage to the environment as such separately from or in addition to the reparation of damage relating to death, personal injury or loss of property or economic value. The specific type of damage envisaged shall depend on the purpose and nature of the regime.

Article 24

Environmental regimes should provide for a broad concept of reparation, including cessation of the activity concerned, restitution, compensation and, if necessary, satisfaction.

Compensation under such regimes should include amounts covering both economic loss and the costs of environmental reinstatement and rehabilitation. In this context, equitable assessment and other criteria developed under international conventions and by the decisions of tribunals should also be considered.

Article 25

The fact that environmental damage is irreparable or unquantifiable shall not result in exemption from compensation. An entity which causes environmental damage of an irreparable nature must not end up in a possibly more favorable condition that other entities causing damage that allows for quantification.

Where damage is irreparable for physical, technical or economic reasons, additional criteria should be made available for the assessment of damage. Impairment of use, aesthetic and other non-use values, domestic or international guidelines, intergenerational equity, and generally equitable assessment should be considered as alternative criteria for establishing a measure of compensation.

Full reparation of environmental damage should not result in the assessment of excessive, exemplary or punitive damages.

Access to Dispute Prevention and Remedies

Article 26

Access by States, international organizations and individuals to mechanisms facilitating compliance with environmental regimes, with particular reference to consultations, negotiations and other dispute prevention arrangements, should be provided for under such regimes.

In the event of preventive mechanisms being unsuccessful, expeditious access to remedies, as well as submission of claims relating to environmental damage, should also be provided for.

Article 27

Environmental regimes should make flexible arrangements to facilitate the standing of claimants, with particular reference to claims concerning the environment *per se* and damages to areas beyond the limits of national jurisdiction. This is without prejudice to the requirement of a direct legal interest of the affected or potentially affected party to make an environmental claim under international law.

Article 28

Environmental regimes should identify entities that would be entitled to make claims and receive compensation in the absence of a direct legal interest if appropriate. Institutions established under such regimes, including ombudsmen and funds, might be empowered to this end. A High Commissioner for the Environment might also be envisaged to act on behalf or in the interests of the international community.

Article 29

Dispute prevention might also be facilitated by the participation of qualified States and entities in the planning process of major projects of another State in the context of mechanisms of international cooperation. Domestic and regional environmental impact assessment should also be required for activities likely to have transboundary effects or affect areas beyond the limits of national jurisdiction.

Remedies Available to Interested Entities and Persons for Domestic and Transnational Claims

Article 30

Environmental regimes should provide for equal access on a non-discriminatory basis to domestic courts and remedies by national and foreign entities and by all other interested persons.

Article 31

Environmental regimes should provide for the waiver of State immunity from legal process in appropriate claims. Arbitral awards and other decisions rendered by international tribunals under such regimes should have the same force as national decisions at the domestic level.

In cases having multinational aspects, environmental regimes should take into consideration existing rules on jurisdiction and choice of law and, if necessary, provide for such rules.

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(September 4, 1997)

Annex 519

D. Tladi, "Of Course for Humans: A Contextual Defence of Intergenerational Equity", *South Africa Journal of Environmental Law and Policy,* 2002, pp. 177-186

Of Course for Humans: A Contextual Defence of Intergenerational Equity*

Dire Tladi**

Abstract

The principle of intergenerational equity, an integral part of the sustainable development, has been the subject of criticism from ecocentrists. Ecocentrists argue that the principle of intergenerational equity as an anthropocentric concept is ethically flawed as it would countenance the destruction of any parts of the environment that humans may find to be without value. In this article I argue that such views result from a failure to understand the principle of intergenerational equity. I argue in this paper that a proper understanding of the principle of intergenerational, in the context of the other elements of sustainable development, requires the protection of the environment and not its destruction.

1 Introduction

In August 2002 South Africa will host the World Summit on Sustainable Development. The 2002 summit follows on the footsteps of two earlier summits, the Rio Conference (UNCED)[1] held in 1992 and the Stockholm Conference[2] held in 1972. The three summits represent a recognition that the environment is under threat as a consequence of some human activities, and that there is a need to change our behavioral patterns if we are to save this environment.

The need for economic development has also been recognized as important and inextricably linked to environmental concerns. Lack of development and the poverty resulting therefrom are problems in themselves. Moreover, the poverty gripping the developing world leads to other problems such as disease, civil wars and more environmental degradation.[3] These problems in turn lead to further poverty thus creating a vicious circle.

There appears to be consensus that there is a tension between the need for

* Paper presented at the Rio+10 and the Future of International Environmental Law Conference, 19th August 2002, University of Natal, South Africa. The paper was written and presented prior to the World Summit on Sustainable Development and consequently the outcomes of the Summit have not been incorporated.

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1 1992 United Nations Conference on the Environment and Development, Rio de Janeiro.

2 1972 Stockholm Conference on the Human Environment, Stockholm.

3 Andrew Hurrel and Bendict Kingsbury 'The international politics of the environment: An introduction' in Hurrel and Kingsbury (Eds) *The International Politics of the Environment* (1991) at 3.

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environmental protection and the need for economic development.[4] Moreover, it is clear that the tension is not merely coincidental. The wealthy nations have acquired their prosperity as a result of industrialization. Rapid industrialization has, in turn, lead to the degradation of the environment. For example, as a result of a variety of human activities flowing from industrialization, the atmospheric concentrations of greenhouse gases have increased to the extent that they threaten to change the climate with drastic consequences. Developing countries, also seeking development, are now embarking on the same road to industrialization which poses severe danger for the environment.

An important concept that has been broached as the key to saving the environment is sustainable development. Sustainable development is a concept that aims to balance the need for economic development with environmental needs. Thus it requires that in the process of development, environmental concerns must be considered and vice versa. The concept of sustainable development is thus a tool towards harmonization of the need for development with the necessity of protecting the environment.[5]

The definition often given to sustainable development is 'development that meets the needs of the present generation without compromising the ability of future generation to meet their own needs'.[6] It would be naive to assume that this definition is sufficient for the purpose of determining the content of sustainable development. Nevertheless, the definition does represent a good starting point in efforts towards understanding sustainable development.

Commentators have on the basis of documents on sustainable development identified several key elements of sustainable development. These elements include the principles of intergenerational equity, integration, intragenerational equity and the principle of sovereignty over natural resources as limited by state responsibility.

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[4] The Brundtland Commission Report (World Commission on Environment and Development (WCED) *Our Common Future* (1997)) noted that the we are not dealing with 'separate crises: an environmental crises, a development crises, an energy crises. They are all one': WCED *Our Common Future* (1987) at 4. See also George William Mugwanya 'Global free trade vis-a-vis environmental regulation and sustainable development: Reinvigorating efforts towards a more integrated approach' (1999) *Journal of Environmental Law and Litigation* 401. See also report by Mimi Hall 'Bush defends his rejection of pact on global warming' in (1 April 2001) *USA Today* at 2A wherein it is reported that Bush said that the 'idea of placing caps on carbon dioxide does not make economic sense for America' and that while he was worried about the climate change problem he was 'also worried about the fact that people may not be finding jobs in America'.

[5] See separate opinion of Judge Weeramantry in the *Gabcikovo - Nagymaros case (Hungary v Slovenia)* 1998 *ILM* 168 at 205.

[6] WCED op cit n4 at 43.

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Intragenerational equity in the environmental context requires that in efforts towards environmental protection the imbalance in wealth between developing and developed states should be considered.[7] The principle of integration requires that environmental concerns should constitute an 'integral part of the developmental process'.[8] Sovereignty over natural resources as limited by state responsibility is just an extension of normal international law principles i.e. that while a state has sovereignty over its territory, such a state may not use or allow its territory to be used to cause harm.[9]

This paper is concerned with the first mentioned of these elements i.e. intergenerational equity. In this paper I investigate the content of intergenerational equity as found in international environmental instruments. I also consider the main argument often advanced against the principle of intergenerational equity, namely, that as an anthropocentric approach[10] the principle of intergenerational equity is ethically flawed. Similar arguments are often advanced against any human rights approaches to environmental protection. While intergenerational equity has, in the past, been defended against these ecocentric claims, those defending intergenerational equity have not (at least not expressly) relied on relation between intergenerational equity and the other elements of sustainable development. It is this contextual defense of intergenerational equity that forms the essence of this contribution.

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[7] For intragenerational equity in international instruments, see Principle 9 of the Stockholm Declaration on the Human Environment available at http://www.unep.org/Documents/Default (site visited on 1 October 2001); Principle 7 of the Rio Declaration on the Environment and Development 1992 *ILM* 876; Art 5 of the Montreal Protocol on Substances that Deplete the Ozone Layer (1987) as amended available at http://www.unep.ch/ozone/montreal.shtml (site visited on 19 June 2001). Reproduced in Carter and Trimble (Eds) *International Law: Selected Documents* (1991) at 731; Art 10 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change available at http://unfccc.int.resource/docs/convkp/kpeng.pdf (site visted on 19 Feb 2002).

[8] Principle 4 of the Rio Declaration. See also Agenda 21, chapter 8 available at http://www.unep.org/Documents (site visited on 30 August 2001). This principle is often invoked in the debate on sustainable development and free trade regimes such as WTO and also in connection with policies of international monetary institutions such as the World Bank.

[9] See Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration. The principle has also been accepted in the environmental context by the International Court of Justice in the advisory opinion on the *Legality of the Threat or Use of Nuclear Weapons* 1996 *ICJ Reports* 229 where the Court stated that the 'existence of a general obligation of states to ensure that activities within their jurisdiction and control respect the environment of other states ... is now part of the corpus of international relating to the environment' at 29.

[10] An anthropocentric approach places man at the centre. Thus an anthropocentric approach to environmental protection would make the interest of mankind the primary motivating factor in environmental protection.

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2 Principle of intergenerational equity in international instruments

The principle of intergenerational equity implies that the present generation owes a duty to future generations to leave the earth and its environment in no worse a condition than they found it.[11]

Perhaps nothing else has come to symbolise the principle of intergenerational equity like the definition of sustainable development found in the Brundtland Commission report i.e. 'development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.'[12] Malviya[13] defines sustainable development as 'a process in which the exploitation of resources, the direction of investments, the orientation of technological development, and the institutional changes are made consistent with future as well as present needs'.[14]

While the emergence of the theory or principle of intergenerational equity generated academic debate about the legitimacy and ethics of such a theory, it is clear that the principle has crossed into the domain of international law.[15] Even Professor D'Amato, a staunch opponent of the principle concedes the influence that intergenerational equity has had on modern international environmental law.[16] Thus, while intergenerational equity may

[11] See generally Edith Brown Weiss *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* (1989). Although some of the ideas expressed in the work book were earlier developed in Edith Brown Weiss 'The planetary trust: conservation and intergenerational equity' (1984) *Ecology Law Quarterly* 494 this book remains a must for the study of intergenerational equity. The main thrust of the book is contained at p 2 where she says: 'The thesis of this study is that each generation receives a natural and cultural legacy in trust from the previous generations and holds it in trust for future generations. This relationship imposes upon each generation certain planetary obligations to conserve the natural and cultural resource base for future generations...' See also *Minors Oposa v Secretary of Department of Environmental and Natural Resources* reproduced in 1994 *ILM* 173 where the Supreme Court of the Philippines found in favour of petitioners who sought to claim a right to clean environment not only for themselves and other Filipinos, but also for future Filipino generations.

[12] WCED *Our Common Future op cit* n 6 at 43.

[13] RA Malviya 'Sustainable Development and the Environment: Emerging Trends and Issues' 1996 *Indian Journal of International Law* 57.

[14] At 59. See also WCED *Our Common Future op cit* n 6 at 9.

[15] See, eg, Brown Weiss op cit n11 (1984) who argues at 540 et seq. that the principle is an *obligatio erga omnes*. The principle has also found its way into several international environmental law instruments.

[16] See Anthony D'Amato 'Do we owe a duty to future generations to preserve the global environment?' 1990 *American Journal of International Law* 190 at 190 where he says: 'A common assumption underlying nearly every book or essay on the global environment is that the present generation owes a duty to generations yet unborn to preserve the diversity and quality of our planet's life-sustaining environmental resources.'

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be questioned as an ethical theory, its influence on modern international environmental law cannot be questioned.

The 1972 Stockhom Declaration recognized the need to safeguard the environment against degradation 'for the benefit of present and future generations through careful planning or management.'[17] Thus we seek to protect the environment not only for our own sakes but also for the sakes of those to come. The principle of intergenerational equity recognizes that our economic activities may disadvantage future generations.

The acceptance of the principle of intergenerational equity is premised on a realization that developmental activities put a strain on natural resources at a rate greater than the resources can renew themselves. If this continues unabated future generations will be left without these same life-sustaining resources.[18] The Brundtland Commission noted that while 'nature is bountiful .. it is also fragile' such that 'there are thresholds that cannot be crossed without endangering the basic integrity of the system' and 'the survival of life on earth.'[19] It was to this end that the Commission adopted the legal principles proposed by the WCED Experts Group on Environmental Law which proposed, *inter alia*, that states 'shall conserve and use the environment and natural resources for the benefit of present and future generations.'[20]

The Rio instruments also contain references to intergenerational equity. The Rio Declaration requires the 'right to development' to be fulfilled 'so as to equitably meet developmental and environmental needs of present and future generations.'[21] While this formulation has been criticized[22] the invocation of intergenerational equity is clear and undeniable.

Similarly, the Climate Change Convention, also adopted at Rio, invokes

[17] Principle 2 of the Stockholm Declaration op cit n7. It must be pointed out the principle of intergenerational equity predates the Stockholm conference. It appears in the 1946 Whaling Convention which recognizes the 'interests of the nations of the world in safeguarding for *future generations* the great nature resources represented by whale stocks' (emphasis added). See also preambles of the 1968 African Nature Convention and the 1972 World Heritage Convention both cited in Philippe Sands 'International Law in the Field of Sustainable Development: Emerging Legal Principles' in Winfred Lang (ed.) *Sustainable Development and International Law* (1995) at 59.

[18] WCED *Our Common Future op cit* n 6 at 13.

[19] Id at 33.

[20] Principle 2, Proposed Legal Principles for Environmental Protection and Sustainable Development adopted by WCED Experts Group on Environmental Law. See for summary Annex 1 WCED *Our Common Future* at 348.

[21] Principle 3 of the Rio Declaration.

[22] See, eg, Marc Pallemaerts 'International environmental law from Stockholm to Rio: Back to the future?' in P Sands *Greening International Law* (1994).

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the principle of intergenerational equity. Article 3 of the Convention, entitled 'Principles', provides, in part, that the parties 'should protect the climate system for the benefit of present and future generations of humankind..'.[23] The Convention on Biodiversity makes preambular references to the principle of intergerational equity. The Fourth Lome Convention provides, in similar manner, that the parties should endeavor to bring an 'immediate improvement in the living conditions of their populations and to safeguard those of future generations'.[24]

Although generally accepted as a key element of sustainable development intergenarational equity remains rather controversial. The criticism against intergenerational equity from an ecocentric perspective requires us to ask a simple question: Is intergenerational equity compatible with a healthy environment? I believe so.

3 Evaluating Criticism of Intergenerational Equity

The main criticism against the principle of intergenerational equity is made from an ecocentric approach. Ecocentrism is an approach that requires the environment to be protected for its own sake and not solely for the interest of man.[25] From an ecocentric perspective, intergenerational equity as an anthropocentric approach, is ethically flawed and insufficient to ensure meaningful protection of the environment. It is submitted that an attack on intergenerational equity on these grounds necessarily implies an attack on sustainable development.

The argument for an ecocentric approach to environmental protection is made by several authors.[26] In their impassioned plea for the recognition of a right to life for whales, Professor D'Amato and Mr Chopra contend that human approaches to whales can be organized into six stages.[27] The stages are the free resource stage, the regulation stage, the conservation stage, the protection stage, the preservation stage and an emerging entitlement stage. The conservation stage, although critical, still represents an anthropocentric approach. At this stage protection of the whale is undertaken for the benefit

[23] Art 3(1) UN Framework Convention on Climate Change (1992) *ILM* 851.

[24] Art 33 of the Fourth Lome Convention (1990) *ILM* 783.

[25] See generally Robyn Eckersely *Environmentalism and Political Theory: Towards an Ecocentric Approach* (1992); See also Scott Burchill and Andrew Linklater (ed) *Theories of International Relations* (1996) at 254 et seq.

[26] See, eg, Anthony D'Amato and Sudhir K Chopra 'Whales: Their emerging right to life' (1991) *American Journal of International Law* 21; D'Amato op cit n16; Alexander Gillespie *International Environmental Law, Policy and Ethics* (1997); Robyn Eckersely *Environmentalism and Political Theory: Towards an Ecocentric Approach* (1992).

[27] D'Amato and Chopra op cit n26 at 28.

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and health of the whaling industry (a human interest).[28] The transition from the conservation to protection stage is a gradual and psychological one where the protection of the whale is undertaken, not for the benefit of the whaling industry, but rather for the 'survival and longevity of whales as a species'.[29] From this stage the whale species is protected for its own sake and not because of any value it has for man.

Ecocentrists would suggest that our motive for protecting the environment should not be a duty we owe to future generations but rather a duty we owe to nature *per se* regardless of its utility to man.[30] In their work, D'Amato and Chopra argue that the right of the whales to be protected exists (in part) because they 'are the most specialized of all mammals ...[T]hey are sentient, they are intelligent, they have their own community, and they can suffer'.[31]

Of course, moving from the premise that the whale indeed does possess all the qualities attributed to it,[32] the argument does not take the ecocentric argument very far, i.e. that nature should be protected for its own sake. Where does their argument leave other natural resources that do not possess comparable qualities? Are other natural resources less deserving of protection? The authors themselves say that they do not claim 'that the entitlement asserted in [the] article should apply exclusively to whales'.[33] However, they do not show how other species, especially non-sentient species, can benefit from their exposition.

It is submitted that at the heart of every sincere argument for ecocentrism is a fear that *any* anthropocentric approach will necessarily yield less protection for the environment. The assumption here is that intergenerational equity as an anthropocentric approach to environmental protection will countenance the destruction of any species or part of nature that is not of value to human beings.[34] Nothing can be further from the truth. Consider the definition of sustainable development given by the Brundtland

[28] Id at 30 et seq.

[29] Ibid.

[30] Id at 23.

[31] Id at 22.

[32] The contentions regarding these qualities are well supported by authorities. The authors cite, *inter alia*, J Lilly *The Mind of the Dolphin: A Nonhuman Intelligence* (1967) for their contention that '[W] hales speak to other whales in a language that appears to include abstruse mathematical poetry'. The authors also assert, citing Morgan 'The Whale Brain: The Anatomical Basis of Intelligence' in McIntyre (ed) *Mind in the Waters* (1974), that whales have developed interspecies communication with dolphins.

[33] D'Amato and Chopra *op cit* note 28.

[34] See, eg, A Gillespie op cit n26 at 22, where he says that under the anthropocentric model the protection of nature is only required if it serves man's interests and once 'the interest is gone so too is the reason to preserve the environment'.

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Commission to sustainable development: development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.

The principle of intergenerational equity requires the present generation to leave the environment in as good a position as it finds it.[35] Intergenerational equity does not allow the plundering of resources that *we may find* to be valueless. Inherent in the principle of intergenerational equity (as represented in the Brundtland definition) is a recognition of the autonomy of future generations to determine for themselves what their needs may be. Unwittingly D'Amato and Chopra make this point:

> 'Our moral obligations to others cannot be grounded on our expectation of future help from them. Even so we cannot know what *potential future benefit* to persons the continued existence of whales might afford. *Medical science is replete with examples of cures derived from animals and plants, many of which seemed useless* ..'[36]

Thus a proper understanding of the principle of intergenerational equity would require the protection, and not destruction, of all natural species and not only those we value. It is only in this way that future generations would be able to meet their own needs, even those that we could not have foreseen.

Moreover, I think that those who assume that intergenerational equity represents anti-environmental sentiments miss the point. Intergenerational equity is concerned with our *duty* to protect the environment and not our *right* to destroy. As Professor Weiss argues that while equity is concerned with

> 'equity among generations of human species ... this implies great respect for the natural system of which we are a part, but it does not imply that all other living creatures are or should be treated equally. Rather, the human species .. has a special obligation to maintain the environment ..'[37]

I hope that the preceding discussion shows why intergenerational equity should not be objectionable. However, beyond just being unobjectionable, intergenerational equity is more valuable when compared to any ecocentric approach. The value of intergenerational equity lies in that it gives recognition to the need for development. The need for development (in an environmental context) would not be compatible with ecocentrism. To take D'Amato and Chopra's argument for the whale's right to life as an example, *sustainable exploitation* of whales for developmental and/ or subsistence purposes would not be permissible.[38] As has been pointed out it seems a

[35] See Edith Brown Weiss 'Our rights and obligations to future generations for the environment' (1990) *American Journal of International Law* 198 at 200. See also Edith Brown Weiss *In Fairness to Future Generations* op cit n11 at 2.

[36] Op cit n26 at 27 (emphasis added).

[37] Op cit n35.

[38] Indeed the authors expressly go that far when they argue art 1(2) of the International Covenant on Economic, Social and Cultural Rights, which provides that no one may be deprived

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rather 'strange paradox that a movement that exhorts the harmonious coexistence of people and nature ... somehow forgets about the survival of humans.'[39]

Developmental process and the natural environment are inextricably connected. Any approach to environmental protection that does not make allowance for development cannot yield an equitable balance between environmental protection and development. Any approach that fails to yield such an equitable balance will fail to prevent environmental degradation because of the interconnection between development (and lack thereof) and environmental degradation.[40] Thus properly understood and applied the principle of intergenerational equity is capable of providing the basis for a sustainable approach.

The elements of sustainable development, including intergenerational equity, are based on an understanding of this inextricable link between developmental processes and environmental needs. Seen in this light, intergenerational equity asserts environmental imperatives (for the sake of humankind) but also recognizes the importance of developmental needs represented in the principle of intragenerational equity.[41] The principle of integration would then require the balancing of these two needs. After all, how can we expect an impoverished community to care for the environment if it cannot feed its hungry members today?[42]

4 Conclusion

Modern international environmental law and policy has recognized the inextricable link between the environment and economic development. This link exists not only in the sense that the majority of environmental problems can be traced back to unsustainable methods of development but also in the sense that economic development in the developing world is a necessary requirement for the prevention of further environmental degradation.

The principle of intergenerational equity along with intragenerational

of means of subsistence 'should be read to imply a caveat: Aso long as other rights [of the whales] are not violated' at 59 et seq.

[39] P Taylor 'Can the environmental movement attract and maintain the support of minorities' quoted in Klaus Bosselman 'Justice and the environment: building blocks for a theory of ecological justice' in Klaus Bosselman and Benjamin Richardson *Environmental Justice and Market Mechanisms: Key Challenges for Environmental Law and Policy* (1999) at 34 footnote 29.

[40] See discussion under Introduction supra.

[41] Brown Weiss asserts that the principle of intragenerational equity is part of the principle of intergenerational equity. See Brown Weiss 'Our Rights and Obligations' op cit n35 at 201.

[42] See Brown Weiss *In Fairness to Future Generations* op cit n11 at 27.

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equity and integration recognizes this link and imposes a duty on the present generation to leave the environment in no worse a condition that we found it. Nothing in the principle of intergenerational equity suggests or even implies a right to destroy the environment.

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Annex 520

R. Rayfuse, "Protecting Marine Biodiversity in Polar Areas Beyond National Jurisdiction", *Review of European Community & International Environmental Law,* 2008, pp. 3-13

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Protecting Marine Biodiversity in Polar Areas Beyond National Jurisdiction

Rosemary Rayfuse

Relatively little is known about polar marine biodiversity, which faces increasing threats from extractive and non-extractive activities and from the effects of climate change. The international legal regime for the protection of polar marine biodiversity in areas beyond national jurisdiction is currently inadequate, particularly in the Arctic. An important and useful outcome of this International Polar Year would be an international agreement for conservation and sustainable long-term management of marine biodiversity in the central Arctic Ocean areas beyond national jurisdiction. This agreement should incorporate the best elements of the Antarctic Treaty System together with modern conservation and management principles, and it should recognize the legitimate interests of the international community as a whole in the conservation and management of polar marine biodiversity.

INTRODUCTION

The marine environment is complex, dynamic and vast, and knowledge of its components, including marine biodiversity, is still rudimentary. Indeed, scientists estimate that millions of species exist in the oceans, many of which have not yet been documented or assessed. The paucity of knowledge of marine biodiversity is particularly acute in areas beyond national jurisdiction (ABNJ), including the high seas and the deep seabed, which have long been both literally and metaphorically 'out of sight and out mind'. Nowhere has this been truer than in the Earth's polar regions, where geographical and physical characteristics of remoteness, inaccessibility and extreme environmental conditions have limited the acquisition of knowledge of marine biodiversity. The International Polar Year (IPY), launched in March 2007, has provided an unprecedented opportunity to increase knowledge and understanding of marine biodiversity in the polar regions. However, as is clear from experience in other ocean areas, knowledge and understanding alone is not sufficient to ensure the conservation and sustainable use of the oceans and their biodiversity for current and future generations. Effective governance mechanisms are needed to address adequately the various challenges that arise.

At the global level, discussions in international fora have raised questions as to the ability of the current international legal regime to adequately protect the marine environment, including marine biodiversity and vulnerable marine ecosystems, from existing, new and emerging activities in and uses of oceans in ABNJ. United Nations General Assembly (UNGA) resolutions have repeatedly encouraged States and relevant international organizations to improve the scientific understanding and assessment of marine ecosystems and to consider ways to integrate and improve the management of risks to marine biodiversity within the framework of the United Nations Convention on the Law of the Sea (UNCLOS).[1] These issues have been raised through the annual Informal Consultative Process and, in 2004, the UNGA established an Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction.[2] Protection of marine biodiversity was also addressed during the 2006 Review Conference of the UN Fish Stocks Agreement (FSA)[3] and discussions on marine protected areas (MPAs), particularly in ABNJ, have taken place at the Conference of the Parties to the Convention on Biological Diversity (CBD).[4]

This article examines the adequacy of existing legal regimes to protect marine biodiversity in polar areas beyond national jurisdiction. It is often suggested that a fundamental difference between the two polar legal regimes, posited as a sovereignty paradigm in the Arctic and a lack of sovereignty paradigm in the Antarctic, renders bi-polar comparison of regulatory approaches

[1] United Nations Convention on the Law of the Sea (Montego Bay, 10 December 1982) (UNCLOS).

[2] The first meeting of the Working Group was held in February 2006. See 'Report of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction' (UN Doc. A/61/65, 21 March 2006).

[3] Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (New York, 4 August 1995).

[4] Convention on Biological Diversity (Rio de Janeiro, 5 June 1972).

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nugatory. However, the suspension of sovereignty claims in the Antarctic[5] currently renders the entire Antarctic area, including the Southern Ocean south of the Antarctic Convergence, one beyond national jurisdiction, albeit one governed by a special regime established by the various agreements and bodies comprising the Antarctic Treaty System. A bi-polar comparison of the legal regimes applicable to polar ABNJ is therefore both possible and, in the context of the IPY, appropriate. While three high seas areas exist in the Arctic,[6] this article focuses particularly on the central Arctic Ocean, which is almost totally unregulated. It also examines the Southern Ocean.

The next section below provides a brief description of polar marine biodiversity. Section 3 briefly discusses the threats to marine biodiversity in polar regions. Section 4 examines the applicable legal regimes and highlights the crucial differences in governance between Arctic and Antarctic marine ABNJ. From this discussion, section 5 proceeds to a proposal on how to address the governance gap currently applicable to Arctic ABNJ. It is concluded that a useful outcome of this IPY would be the negotiation of an international agreement establishing a regional oceans management organization mandated to conserve and protect the marine environment, including marine biodiversity, in the Arctic.

POLAR MARINE BIODIVERSITY

Polar oceans are among the most productive marine ecosystems on Earth, supporting high biomasses (as opposed to high rates of species diversity) of marine living resources.[7] Species are found in the sea ice, in the water column and on the sea floor.

In the Arctic, charismatic mega-fauna such as whales, walrus and seals are well documented. However, according to the Census of Arctic Marine Life, current knowledge of Arctic marine biodiversity, particularly in ABNJ, is still rudimentary compared to most other regions, due to the logistical challenges imposed by its multi-year ice and inhospitable climate. Nevertheless, current knowledge indicates that the Arctic Ocean holds a multitude of unique life forms highly adapted in their life history, ecology and physiology to the extreme and seasonal conditions of their environment. Bacteria, protozoa and metazoa have been identified in the sea ice, although little is known of community abundance or diversity. Amphipods, too, have been identified as thriving at the underside of the sea ice. Plant and animal benthic communities include crustaceans, amphipods, polychaetes, bivalve molluscs, brittle stars, sea urchins, worms, sponges and cnidarians. Indeed, roughly 5000 species of marine invertebrates are known to inhabit the Arctic, with over 90% of those living at the sea floor. About 350 to 400 of those species are deep-water species living in the central Arctic Ocean.[8] Moreover, the existence of hydrothermal vents in the Arctic, together with their unique ecosystems of extremophiles and specially adapted species, has now been confirmed by the discovery of vent systems on the Gakkel Ridge north of Greenland[9] and the Mohns Ridge between Spitsbergen and Iceland.[10] Large low temperature fields that support a vast community of life including large sea lilies sitting on top of mineral/bacterial chimney-like structures have also been found.[11] In the water column relatively little is known about non-copepod species and abundance, particularly deep-water species where the greatest potential for the discovery of new species is expected. In addition, although numerous fish and shrimp species are known to exist, little is known of their abundance, diversity or range, particularly in the central Arctic Ocean, where the physical impossibility of conducting fish collecting operations in ice-covered waters has thus far resulted in a void in basic knowledge.[12]

In the Antarctic, too, larger organisms such as whales, penguins, seals, seabirds, fish, squid and krill are well documented. However, little is known of other aspects of Antarctic marine biodiversity. According to the Census of Antarctic Marine Life:

> Current knowledge of Antarctica's marine biodiversity is patchy. For the most part, almost nothing is known about the mesopelagic, bathy/abysso-pelagic and benthic fauna of the slopes and deep-sea abyssal plains. Practically nothing is known about the tiny organisms (bacteria, archaea, eukaryl protists, viruses, nanoplankton) in the sea wherever they

[5] Pursuant to Article IV of the Antarctic Treaty (Washington, 1 December 1959).

[6] There are three areas of 'high seas' in the Arctic: the central Arctic Ocean, the Barents Sea 'Loophole' and the Norwegian Sea 'Banana Hole'.

[7] V. Smetacek and S. Nicol, 'Polar Oceans in a Changing World', 437:7057 *Nature* (2005), 362.

[8] See R. Gradinger, R. Hopcroft and B. Bluhm, 'Arctic Census of Marine Life (ArcCoML) Program Proposal' (15 April 2004), at 5, available at <http://www.arcodiv.org/files/Arctic_CoML_for%20web.pdf>.

[9] J. Roach, 'Hydrothermal Vents Found in Arctic Ocean', *National Geographic News* (23 January 2003), available at <http://news.nationalgeographic.com/news/2003/01/0123_030123_hotspring.html>. See also L. Lippsett, 'Summer Under Arctic Ice: A conversation with WHOI geophysicist Rob Reves-Sohn' (WHOI, 19 July 2007), available at <http://www.whoi.edu/oceanus/viewArticle.do?id=29731&sectionid=1001>.

[10] Anon., 'Researchers Find Hydrothermal Vent Fields in Far North', *ScienceDaily* (20 August 2005), available at <http://www.sciencedaily.com/releases/2005/08/050819123850.htm>.

[11] Ibid.

[12] See R. Gradinger, R. Hopcroft and B. Bluhm, n. 8 above.

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occur and in whatever habitats, or about the faunas associated with hydrothermal vents, cold seeps, and seamounts.[13]

Scientific expeditions conducted between 2002 and 2005 discovered over 580 new species of isopod crustaceans in the deep Weddell Sea adjacent to the Antarctic Peninsula,[14] with a follow-up cruise in 2006 revealing at least 15 potentially new species of amphipod (shrimp-like) crustaceans and four new species of cnidarians (organisms related to coral, jellyfish and sea anemones).[15] The Census of Marine Life OBIS (Ocean Biogeographic Information System) database and its Antarctic component SCAR–MarBin (the Scientific Committee on Antarctic Research – Marine Biodiversity Information Network) currently list 5957 marine life forms for the Antarctic with an estimated 5000 to 11,000 species yet to be discovered.[16]

THREATS TO POLAR MARINE BIODIVERSITY

Threats to polar marine biodiversity mirror threats to marine biodiversity globally. These threats arise from both extractive and non-extractive activities. Extractive activities such as fishing, whaling and bioprospecting carry with them the threat of over-exploitation of both targeted and non-targeted species, as well as the potential for habitat destruction from the use of destructive fishing practices such as bottom trawling or other harvesting or extraction techniques. Due to its traditional perennial ice cover, no commercial fishing or bioprospecting currently takes place in the central Arctic Ocean. However, in the Antarctic, illegal, unreported and unregulated (IUU) fishing, particularly for Patagonian toothfish, continues to pose a significant threat to marine biodiversity, undermining not only the viability of the target species, but also of by-catch of non-target fish, sea birds and other species. Recent proposals for massive extraction of krill, primarily to produce feed for fish farms and oil for pharmaceutical and food additives, have raised concerns that the activity may threaten the very foundations of the region's ecosystem, which is fundamentally dependant on krill as a food source.[17] Bioprospecting, too, is already being conducted in Antarctic waters.[18]

Non-extractive activities such as shipping, tourism, marine scientific research, the laying of cables and pipelines or construction of artificial islands or other installations and ocean dumping all give rise to other possible harms including vessel source pollution, introduction of alien species, noise pollution and habitat destruction. None of these threats are new, however, they are increasing. In the Arctic, other extractive activities such as offshore oil and gas exploration and seabed mining may pose threats to polar marine biodiversity, while in the Antarctic pollution from land-based sources such as research stations has already become an issue.

Perhaps the greatest threat to polar marine biodiversity, however, is that posed by climate change. Numerous ice-dependent species, including polar bears, walrus, seals and Adelie penguins are either threatened with extinction or increasingly vulnerable due to reductions in their ice habitat.[19] Warming ocean temperatures, decreasing salinity due to sea ice melt and increasing ocean acidification due to excess CO_2 absorption are also affecting other species. Krill, the foundation of the Antarctic food chain, are reported to be disappearing from their traditional spawning grounds[20] and evidence is emerging of geographical shifts in populations of other Antarctic species, including the Patagonian toothfish, while non-Antarctic species such as southern bluefin tuna are migrating southwards. In the Arctic, too, cold-adapted fish stocks are being squeezed

[13] M. Stoddart and C. Summerhayes, 'Census of Antarctic Marine Life (CAML) Project Description' (CAML, undated), available at <http://www.coml.org/descrip/caml.htm>. See also CAML Scientific Steering Committee, 'The Census of Antarctic Marine Life Science Statement' (CAML, 30 May 2005), available at <http://www.caml.aq/education-outreach/documents/20061114_CAMLSciStatement_000.pdf.

[14] A. Brandt *et al*., 'First Insights into the Biodiversity and Biogeography of the Southern Ocean Deep Sea', 447:7142 *Nature* (2007), 307.

[15] Anon., 'Antarctic Marine Explorers Reveal First Hints of Biological Change After Collapse of Polar Ice Shelves', *M/V Polarstern* News Release (25 February 2007), available at <http://www.caml.aq/news/documents/FINALCAML-PolarSternnewsrelease2.pdf>.

[16] Ibid.

[17] Australian Antarctic Division Press Release, 'There's oil in them there krills' (22 October 2007), available at <http://www.aag.gov.au/default.asp?casid=17>.

[18] D. Lohan and S. Johnston, *Bioprospecting in Antarctica* (United Nations University – Institute of Advanced Studies, 2005), at 7–13; B.P. Herber, 'Bioprospecting in Antarctica: The Search for a Policy Regime', 42:221 *Polar Record* (2006), 139–146; S. Arico and C. Salpin, *Bioprospecting of Genetic Resources in the Deep Seabed; Scientific, Legal and Policy Aspects* (United Nations University – Institute of Advanced Studies, 2005). See also the article by David Leary in this issue of *RECIEL*.

[19] On the Arctic, see *Impacts of a Warming Arctic: The Arctic Climate Impact Assessment* (Arctic Council, 2004), available at <http://amap.no/acia/>. On the Antarctic see, for example, WWF International, *Antarctic Penguins and Climate Change* (WWF, December 2007), available at <http://assets.panda.org/downloads/folleto_penguins.pdf>; and D.G. Ainley, *The Adelie Penguin: Bellwhether of Climate Change* (Columbia University Press, 2002). See also Intergovernmental Panel on Climate Change, *Fourth Assessment Report – Climate Change 2007: Synthesis Report* (UNFCCC, 2007), Topic 3, at 12, available at <http://www.ipcc.ch/ipccreports/ar4-syr.htm>.

[20] R. Schubert *et al*., *The Future Oceans – Warming Up, Rising High, Turing Sour* (WGBU German Advisory Council on Climate Change, 2006).

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northward while southern species such as haddock, cod and salmon are migrating into Arctic waters.[21]

The disappearance of polar sea ice will also affect the communities of organisms living in and under the ice. On the one hand, the importance of these communities is demonstrated by recent discoveries in the Antarctic that icebergs, which have been increasing in number over the past decade due to the break up of ice shelves caused by atmospheric warming, are veritable 'hot spots' for ocean life, supporting thriving colonies of sea birds, phytoplankton, krill and fish.[22] Significant reductions in sea ice extent, such as that already evidenced in the Arctic,[23] can therefore be expected to have detrimental effects on polar pelagic ecosystems. On the other hand, the disappearance of sea ice can be expected to lead to shifts and possible increases in both the diversity and abundance of benthic communities.[24]

Aside from the direct effects of climate change, increasing human activities in newly ice-free areas, such as shipping and oil and gas extraction, and activities aimed at mitigating the adverse effects of climate change, may also pose threats to polar marine biodiversity. Ocean fertilization, for example, is currently being touted by some as a simple, quick and environmentally friendly fix to the world's CO_2 emissions problems. Ocean fertilization involves stimulating phytoplankton or algae blooms in the ocean, either by the addition of nutrients such as iron, nitrogen or phosphorous, or by pumping nutrient rich deep water into the shallows. In theory, the phytoplankton absorbs atmospheric CO_2, converting it to organic carbon, which then sinks to the ocean floor, sequestering the CO_2. In reality, neither the efficacy nor the verifiability of the sequestration has yet been shown after repeated experiments,[25] and a range of adverse side effects on the marine environment, including its biodiversity, have been observed and/or predicted. These include changes to the natural speciation of phytoplankton and the marine food web, chemical alterations of the oceans leading to eutrophication, and alteration of primary production patterns resulting in unforeseen, cumulative and long-term consequences.[26] Increased releases of dimethyl sulfide and halogenated organic compounds which contribute to ozone destruction have also been observed, as have increased releases of nitrous oxide and methane, both greenhouse gases with a much higher warming potential that CO_2.[27] Nevertheless, proposals are currently being formulated for large-scale and even basin-wide continuous fertilization of the Southern Ocean.[28]

Potential ecosystem impacts of climate change and proposed climate change mitigation strategies on polar marine ecosystems are currently little understood and 'disentangling the effects of human exploitation of upper trophic levels from basin-wide, decade-scale climate cycles to identify long-term, global trends' has been described as 'a daunting challenge'.[29] Thus, the greatest climate change-related threat to polar marine biodiversity is possibly increased human access and its concomitant propensity for increased exploitation of marine resources. Data gathered during this IPY will help to establish baselines from which the effects of global warming on marine species and ecosystems can be measured in future. It will also provide baselines for the establishment of regimes to manage anthropogenic exploitation of, and effects on, the marine environment and its resources. The question is whether existing polar legal regimes provide an adequate basis for that regulation.

LEGAL REGIMES FOR THE PROTECTION OF MARINE BIODIVERSITY IN POLAR AREAS BEYOND NATIONAL JURISDICTION

PROTECTION OF MARINE BIODIVERSITY IN ARCTIC ABNJ

No pan-Arctic binding legal instrument exists governing the conservation and sustainable use of marine

[21] L. Hamilton, B. Brown and E. Rassmussen, 'West Greenland's Cod to Shrimp Transition: Local Dimensions of Climate Change', 56:3 *Arctic* (September 2003), 271; A. Perry *et al*., 'Climate Change and Distribution Shifts in Marine Fishes', 308:5730 *Science* (24 June 2005), 1912; and M. Inman, 'Fish Moved by Warming Waters', 308:5724 *Science* (13 May 2005), 937.

[22] K.L. Smith Jr. *et al*., 'Free-Drifting Icebergs: Hotspots of Chemical and Biological Enrichment in the Weddell Sea', 317:5837 *Science* (2007), 478.

[23] See, e.g., 'Arctic Sea Ice Minimum Shatters All-Time Record Law, Report Scientists' *ScienceDaily* (21 September 2007), available at <http://www.sciencedaily.com/releases/2007/09/070920160226.htm>.

[24] See n. 8 above.

[25] M.J. Lutz, *et al*., 'Seasonal rhythms of net primary production and particulate organic carbon flux describe biological pump efficiency in the global ocean', 112 *Journal of Geophysical Research* (2007), C10011.

[26] S.W. Chisholm, P.R. Falkowski and J.J. Cullen, 'Dis-crediting Ocean Fertilisation', 294:5541 *Science* (2001), 309.

[27] M.G. Lawrence, 'Side Effects of Oceanic Iron Fertilisation', 297:5589 *Science* (2002), 1993; X. Jin and N. Gruber, 'Offsetting the radiative benefit of ocean iron fertilisation by enhancing N2O emissions', 30:24 *Geophysical Research Letters* (2003), 2249; N. Meskhidze and A. Nemes, 'Phytoplankton and cloudiness in the Southern Ocean', 314:5804 *Science* (2006), 1419.

[28] R. Rayfuse, M.G. Lawrence and K.M. Gjerde, 'Ocean Fertilisation and Climate Change: The Need to Regulate Emerging High Seas Uses' *International Journal of Marine and Coastal Law* (2008, forthcoming).

[29] See V. Smetacek and S. Nicol, n. 7 above.

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biodiversity. While the Arctic Council has a number of programmes relating to protection of the Arctic marine environment, it has no regulatory authority.[30] Similarly the mandate of the North Atlantic Marine Mammal Commission[31] is recommendatory only. Rather, within the Arctic, human activities in ABNJ are governed by the over-arching legal framework of the UNCLOS, including its high seas and deep seabed regimes and a variety of global treaties and competent international organizations regulating specific activities in ABNJ such as fishing, shipping and dumping. These include the two implementing agreements to the UNCLOS, the Implementation Agreement on Part XI[32] and the FSA, as well as the range of treaties adopted under the auspices of the International Maritime Organization (IMO), the most relevant of which for present purposes are the International Convention for the Prevention of Pollution from Ships (MARPOL Convention)[33] and the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London (Dumping) Convention)[34] and the Protocol thereto.[35] Other relevant treaties include the International Convention on the Regulation of Whaling[36] and the CBD.[37]

However, major shortcomings exist in this global framework, including both spatial and substantive gaps and potential overlaps in the various governance and regulatory regimes.[38] The decentralized and sectoral nature of the legal framework gives rise to a range of inconsistent or insufficient mandates in existing agreements and institutions and there is an overall lack of coordination and cooperation both within and across the various sectors. Effective compliance and enforcement mechanisms are generally missing, there is insufficient regulation of the increasing impacts from shipping and military activities, as well as certain other activities, such as marine scientific research, bioprospecting, laying of cables and pipelines, construction of various types of installations and marine archaeology. Additionally a whole range of new and emerging activities such as climate change mitigation techniques and aquaculture are not specifically regulated at all in ABNJ. Modern conservation principles and management tools such as requirements for environmental impact assessment; prevention, minimization or remediation of adverse impacts and ongoing monitoring; and the use of area-based measures including the establishment of MPAs, have not been consistently incorporated into existing agreements or applied in practice to the full range of ocean-based human activities in ABNJ. Moreover, there is no specific regime for the conservation and sustainable use of certain components of marine biodiversity in ABNJ, such as most discrete high seas fish stocks, and there is no regime for assessment of the cumulative impacts over time and across all the different sectors. In addition, there is significant lack of clarity on the applicable regime relating to marine genetic resources in ABNJ, with some arguing for their regulation in accordance with the high seas regime of 'freedoms', and others insisting on their regulation as part of the common heritage of mankind.[39] Finally, there is no regime for coordinating activities occurring between the high seas water column and the extended continental shelf of coastal States. This latter point is of considerable importance in the Arctic where coastal States' claims to the outer or extended continental shelf potentially underlie all but a tiny portion of the high seas water column of the central Arctic Ocean.[40]

In the North-East Atlantic sector of the Arctic, which lies between 42° west and 51° east, and which encompasses the high seas enclaves in the Barents Sea and the Norwegian Sea and the high seas portion of the central Arctic Ocean stretching to the North Pole, the situation is somewhat ameliorated by the existence of regional regimes relating to fisheries and protection of the marine environment. The Convention on the Future of Multilateral Cooperation in North-East

[30] For a recent overview of the work of the Arctic Council, see T. Koivurova and D.L. VanderZwaag, 'The Arctic Council at 10 Years: Retrospect and Prospects', 40:1 *University of British Columbia Law Review* (2007), 121–194.

[31] Established pursuant to the Agreement on Cooperation in Research, Conservation and Management of Marine Mammals in the North Atlantic (Nuuk, 9 April 1992).

[32] Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (New York, 28 July 1994).

[33] International Convention for the Prevention of Pollution from Ships (London, 2 November 1972), as modified by the 1978 Protocol (London, 1 June 1978) and as regularly amended.

[34] Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London, 29 December 1972).

[35] Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London, 7 November 1996).

[36] International Convention for the Regulation of Whaling (Washington, 2 December 1946).

[37] For a comprehensive study of global regimes applicable in the Arctic see L. Nowlan, *Arctic Legal Regime for Environmental Protection* (IUCN, 2001).

[38] For an analysis of gaps and overlaps in the context of high seas fisheries see E.J. Molenaar, 'Managing Biodiversity in Areas Beyond National Jurisdiction', 22:1 *International Journal of Marine and Coastal Law* (2007), 89–124, at 95.

[39] See, e.g., T. Scovazzi, 'Bioprospecting on the Deep Seabed: A Legal Gap Requiring to be Filled', in Francioni and Scovazzi (eds), *Biotechnology and International Law* (Oxford University Press, 2006), 81; D. Tladi, 'Genetic Resources, Benefit Sharing and the Law of the Sea: The Need for Clarity', 13 *Journal of International Maritime Law* (2007), 183; and D.K. Leary, *International Law and the Genetic Resources of the Deep Sea* (Martinus Nijhoff, 2007).

[40] R. Rayfuse, 'Melting Moments; The Future of Polar Oceans Governance in a Warming World', 16:2 *RECIEL* (2007), 196, at 207. For an analysis of the law relating to protection of marine biodiversity on the outer continental shelf, see J. Mossop, 'Protecting Marine Biodiversity on the Continental Shelf Beyond 200 Miles', 38:3 *Ocean Development and International Law* (2007), 283.

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Atlantic Fisheries (NEAFC)[41] applies to all fishery resources including sedentary species, molluscs and crustaceans, except marine mammals, highly migratory species and anadromous stocks. The Convention for the Conservation of Salmon in the North Atlantic (NASCO)[42] applies to all anadromous stocks that migrate beyond areas of national jurisdiction of the coastal States of the North Atlantic throughout their migratory range. Fisheries in the enclosed Barents Sea 'Loop Hole' are regulated pursuant to a tripartite agreement between Iceland, Russia and Norway.[43] With respect to the broader marine environment, the Convention on the Protection of the Marine Environment of the North-East Atlantic (OSPAR) and its five annexes and three appendices on pollution from land-based sources (Annex I), pollution by dumping or incineration (Annex II), pollution from offshore sources (Annex III), assessment of the quality of the marine environment (Annex IV) and protection and conservation of ecosystems and biological diversity of the maritime area (Annex V),[44] regulate all existing maritime activities, apart from fishing, whaling and shipping, to the extent that these activities are not covered by competent global organizations such as the IMO or the International Seabed Authority,[45] and can function as the default authority for new and emerging maritime activities.

Nevertheless, while arguably better than the situation in the rest of the high seas portion of the Arctic Ocean, where no regulatory regime exists, the situation in the North-East Atlantic sector is not ideal. Despite apparently complementary mandates and increasing institutional coherence between the various agreements, significant shortcomings remain. For example, the OSPAR Commission is charged with responsibility for implementing the CBD at the regional level; pursuing an ecosystem approach with an even broader purpose than that of the CBD; and with pursuing the establishment of a coherent network of MPAs. To date, however, the Commission has succeeded in none of this. In 2003, the Commission resolved to establish a network of MPAs by 2010.[46] While Member States have designated a number of areas as MPAs, none of them are located in ABNJ, and it remains unclear how the Commission will identify and designate such areas in any event.[47] In the interim, NEAFC has closed some areas of the North-East Atlantic to fishing to protect cold water corals.[48] However, no area has yet been designated in the Arctic Ocean. Given the current absence of fishing operations in the high latitudes this is perhaps not surprising. However, it is precisely this current lack of activity that provides a useful window of opportunity for the international community to act in a precautionary manner to ensure protection of vulnerable Arctic marine ecosystems.

In addition, OSPAR has thus far failed to provide any indication of an intention to exercise its implicit regulatory competence over a number of activities that can impact on marine biodiversity in ABNJ, including the construction of artificial islands, reefs, installations and structures, the placement of cables and pipelines, sea-based deep sea tourism, marine scientific research and bioprospecting. On the contrary, it has expressed a preference for these activities to be regulated through other competent global and regional organizations.[49] However, no such regulation exists at the moment. With increasing marine scientific research and other activities occurring in the high seas of the central Arctic Ocean, this failure to regulate leaves extremely vulnerable ecosystems and marine biodiversity as unprotected in the North-East Atlantic sector as in the rest of the Arctic Ocean ABNJ. The question inevitably arises as to whether the legal regime in the Antarctic provides a more effective model for the protection of marine biodiversity in polar ABNJ.

PROTECTION OF MARINE BIODIVERSITY IN THE ANTARCTIC

Like the Arctic, the Antarctic is subject to the full range of global agreements relating to protection of

[41] The Convention on the Future of Multilateral Cooperation in North-East Atlantic Fisheries (London, 18 November 1980) (NEAFC Convention) was amended in 2004 and 2006 and the amended text is being applied provisionally by States parties pending ratification. The 1980 Convention did not define the fisheries to which it extended, so there was some doubt as to whether it covered sedentary, molluscs and crustaceans. That doubt has now been removed. The text of the 'new' Convention is available at <http://www.neafc.org/about/docs/new_convention.pdf>.

[42] Convention for the Conservation of Salmon in the North Atlantic (Reykjavik, 22 January 1982).

[43] Agreement between the Government of Iceland, the Government of Norway and the Government of the Russian Federation Concerning Certain Aspects of Co-operation in the Area of Fisheries (St Petersburg, 15 May 1999).

[44] Convention on the Protection of the Marine Environment of the North-East Atlantic (Paris, 22 September 1992) (OSPAR Convention). The first four annexes were adopted together with the Convention. Annex V was adopted in 1998 along with Appendix 3, which sets out criteria for identifying human activities for the purpose of Annex V.

[45] Established pursuant to Article 156 of the UNCLOS, the International Seabed Authority is the international organization through which States parties to the UNCLOS organize and control activities, relating particularly to mineral resources, on the seabed, ocean floor and subsoil thereof in areas beyond national jurisdiction.

[46] OSPAR Commission Recommendation 2003/3 on a Network of Marine Protected Areas (27 June 2003).

[47] 2006 (Second) Report on the Status of the OSPAR Network of Marine Protected Areas (OSPAR Document 07/6/6, 29 June 2007). See Summary Record of the Meeting of the OSPAR Commission, 25–29 June 2007 (OSPAR 07/24/1-E, 29 June 2007).

[48] *Report of the Twenty-Fifth Annual Meeting of NEAFC*, 13–17 November 2006 (NEAFC, 2006), Agenda item 8, at 95 and Annex M.

[49] Briefing on OSPAR's Work on the Protection of the Marine Environment of the High Seas, Summary Record of the Meeting of the OSPAR Commission, 26–30 June 2006 (OSPAR 06/23/1-E, 30 June 2006), Annex 6.

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the environment, at least to the extent that these agreements apply to States parties operating in Antarctic areas. However, unlike the Arctic, the Antarctic is governed by its own regional regime, the Antarctic Treaty System (ATS), which to some extent ameliorates the shortcomings of the global regime, noted above, in its application to the Antarctic. Central to the ATS is the Antarctic Treaty (AT),[50] which suspends sovereign claims and preserves Antarctica for scientific and peaceful purposes only. The Treaty applies to all areas south of 60° South, which includes vast tracts of the Southern Ocean. The Treaty is supplemented by its Environmental Protocol (EP),[51] which prohibits non-scientific mineral resource activity in favour of the comprehensive protection of the Antarctic environment and dependent and associated ecosystems. Activities in the Antarctic Treaty area are subject to environmental impact assessment requirements and are to be planned and carried out in such a manner as to avoid adverse effects on the environment, including its flora and fauna. Annexes to the Protocol deal more specifically with the requirements of environmental impact assessment (Annex I), conservation of Antarctic flora and fauna (Annex II), waste disposal and management (Annex III), prevention of marine pollution (Annex IV), area protection and management (Annex V) and liability arising from environmental emergencies (Annex VI).

With respect to marine biodiversity, the most important element of the ATS is the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR).[52] This Convention applies to all Antarctic marine living resources, in other words, all marine biodiversity, south of the Antarctic Convergence, an area extending beyond that covered by the Antarctic Treaty. The Commission established by the Convention (and sharing the acronym CCAMLR) is charged with ensuring the conservation, defined as including the rational use, of all Antarctic marine living resources, on a precautionary and ecosystem basis in order to maintain the ecological relationships between harvested, depleted and related populations.[53] The Convention itself is often described as being precautionary in origin, having been adopted primarily with a view to ensuring the conservation of krill stocks in advance of the development of any significant commercial krill fishery. There is clearly potential for overlap in the functions of the Antarctic Treaty Consultative Meetings (ATCMs) established under the AT and the EP and CCAMLR, particularly under Annex V to the EP, which provides for the establishment of Antarctic Specially Protected Areas (ASPAs) and Antarctic Specially Managed Areas (ASMAs). However, in matters relating to marine areas and marine living resources, CCAMLR is the operative forum with jurisdiction over regulation of conservation and exploitation of marine biodiversity and over designation of ASPAs and ASMAs.[54]

Much has been written on the successes and failures of CCAMLR in regulating Antarctic fisheries and in implementing its mandated ecosystem approach.[55] In general, CCAMLR is seen as a relatively successful regional fisheries management organization, although, as with fisheries globally, CCAMLR's management of Antarctic fisheries resources has been compromised by poorly regulated or unregulated fishing by both Members and non-Member States. Illegal, unreported and unregulated fishing has had adverse effects on both fish stocks and on other components of marine biodiversity as a result of by-catch of non-target species, including sea birds such as petrels and the iconic albatross. In response, CCAMLR has adopted an extensive range of conservation measures aimed at eliminating IUU fishing and accidental by-catch of non-target species and has embarked on a process to ensure that vulnerable marine ecosystems are protected from significant harm from bottom trawling.[56] At its most recent meeting, in November 2007, CCAMLR also adopted precautionary management arrangements for krill, which should help to ease concerns over the recent massive expansion of krill fisheries.[57] CCAMLR has also begun a process of 'bioregionalization', which involves identifying Antarctic waters at the biological zoning level as well as at the level of ecosystem processes in order to prepare for the identification and creation of a network of marine protected areas. CCAMLR has not, however, dealt with the vexed issue of regulation of bioprospecting for marine genetic resources, although it is competent to do so.

It is clear that CCAMLR has done a great deal to resolve issues relating to the protection of Antarctic

[50] Antarctic Treaty (Washington, 1 December 1959).
[51] Protocol on Environmental Protection to the Antarctic Treaty (Madrid, 4 October 1991).
[52] Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) (Canberra, 20 May 1980).
[53] Ibid., Article II.
[54] No marine area can be designated by the ATCM as an ASPA or ASMA without the prior approval of CCAMLR. See ibid., Annex V, Article 6(2).
[55] See, e.g., D. Miller, E. Sabourenkov and D. Ramm, 'Managing Antarctic Marine Living Resources: The CCAMLR Approach', 19:3 *International Journal of Marine and Coastal Law* (2004), 317; and E.J. Molenaar, 'CCAMLR and Southern Ocean Fisheries', 16:3 *International Journal of Marine and Coastal Law* (2001), 465.
[56] See Conservation Measure CM22-05 (2006) on interim restrictions on the use of bottom trawling gear in high seas areas of the Convention area for the fishing seasons 2006/07 and 2007/08 (XXVth Meeting of the Commission, 23 October – 3 November 2006), available at <http://www.ccamlr.org/pu/e/e_pubs/cm/06-07/22-05.pdf>. See also the *Report of the XXVth Meeting of the Commission* (CCAMLR, 2006), section 12, available at <http://www.ccamlr.org/pu/e/e_pubs/cr/06/i12.pdf>.
[57] The *Report of the XXVIth Meeting of the Commission* will be available at <http://www.ccamlr.org> in due course. This information is based on personal communications.

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marine biodiversity, although lasting solutions to a range of existing and emerging issues have yet to be found. Nevertheless, CCAMLR and the rest of the ATS do provide a governance and regulatory framework within which protection of Antarctic marine biodiversity can be addressed, something almost wholly lacking in the Arctic. Moreover, they attempt to do so in an integrated and comprehensive manner designed to ensure maximum achievement of the objectives and principles of the EP and the other agreements and to avoid inconsistency or inter-agreement interference. Thus, while perhaps not certain, any conflict between CCAMLR and the ATCM over the adequacy of measures for conservation and protection of marine biodiversity would most likely be resolved in favour of CCAMLR or, at any rate, in favour of the approach most likely to ensure achievement of the objective of conservation and protection of marine biodiversity.

Like all international treaty regimes, the ATS and its component agreements can be undermined by parties and non-parties alike. Where implementation and enforcement of obligations is left to States parties, there is a risk of non-implementation or non-compliance and the development of an 'implementation gap' between parties who take their obligations seriously and those who do not. There is also the ever-present risk of activities by non-parties undermining the efforts of the parties. Growing commercial pressures for access to Antarctic marine biodiversity including fisheries and marine genetic resources further exacerbate these problems, while the growing number of cross-cutting environmental issues and strategic environmental needs relating to protection of the marine environment and its biodiversity from marine pollution and extractive activities challenge the ability of the ATS to govern the Antarctic region effectively. The interrelationship of the ATS with other global treaty regimes including the UNCLOS and the CBD is also yet to be fully explored. Nevertheless, while there may be implementation, and even regulatory, gaps in the Antarctic framework, there is no governance gap as there is in the Arctic in ABNJ. The question is, therefore, whether the Antarctic precedent can be of any use in the Arctic.

IMPROVING THE LEGAL REGIME FOR PROTECTION OF MARINE BIODIVERSITY IN POLAR REGIONS

It is often suggested that the ATS is not an obvious model for the Arctic. In large part this is true. In particular, as noted above, the five coastal States bordering the Arctic Ocean (Canada, Denmark, Norway, Russia and the USA) are currently pursuing, or at least investigating, their claims to great swathes of the Arctic seabed as part of their outer or extended continental shelf, pursuant to Article 76 of UNCLOS.[58] Ultimately, only a small portion of the Arctic seabed will be beyond national jurisdiction. Protection of continental shelf biodiversity will therefore be a matter for the coastal States who exercise sovereign rights for the purpose of exploring and exploiting the natural resources of the continental shelf, including all mineral and non-living resources of the seabed and subsoil, as well as all living sedentary species.[59] However, the water column of the central Arctic Ocean above the outer continental shelf remains high seas beyond national jurisdiction and, with the exception of the area covered, albeit inadequately, by OSPAR/NEAFC, no comprehensive legal regime exists for regulation of maritime activities or protection of marine biodiversity in Arctic ABNJ.

The idea of a comprehensive Arctic Treaty has been canvassed elsewhere.[60] In general, there seems to be little appetite for such an agreement. Nevertheless, in furtherance of their self-interest, the five Arctic Ocean States might instead establish a special regime for the Arctic Ocean ABNJ under the UNCLOS, relying, in particular, on the enclosed or semi-enclosed seas provisions of Articles 122 and 123.[61] Precedent certainly exists for the Arctic States to promote themselves as 'custodians' of the Arctic for the international community. This is essentially what Canada, Denmark, Norway, Russia and the USA have done in the Agreement on the Conservation of Polar Bears,[62] where they recognize their 'special responsibilities' and 'special interests' in relation to the protection of polar bears and agree to take action to conserve and manage polar bears through a range of measures, including a prohibition on their hunting, killing and capture except in certain specified circumstances.

However, not only would such an agreement divide the Arctic States by excluding Finland, Iceland and Sweden, it would effectively allow the Arctic Ocean States to appropriate unto themselves control over the entire Arctic Ocean, thereby interfering with the legitimate rights and interests of non-Arctic Ocean States in access to, conservation of and long-term sustainable utilization of the high seas of the Arctic Ocean and

[58] As a non-party to the UNCLOS, the USA is not entitled to claim an outer continental shelf. It is, nevertheless, actively engaged in research to establish the extent of any future claim it may make. See, e.g., J.V. Gerdner, L.A. Mayar and A. Armstrong, 'US Law of the Sea Mapping', 9:2 *Hydro International* (2005), available at <http://www.hydro-international.com/issues/articles/id453-US_Law_of_the_Sea_Mapping.html>.

[59] See UNCLOS, n. 1 above, Article 77.

[60] See, for example, the contribution of T. Koivurova in this issue.

[61] See R. Rayfuse, n. 40 above, at 215.

[62] Agreement on the Conservation of Polar Bears (Oslo, 15 November 1973).

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its resources, including its marine biodiversity. Given the new challenges in the Arctic posed by, or arising as a result of, climate change, there is arguably a legitimate need for non-Arctic States to engage in Arctic matters, particularly where they relate to Arctic ABNJ. Experience from other ABNJ demonstrates that as the ice melts and access to the area increases, effective management, conservation and sustainable use of marine biodiversity will become more difficult, as will regulation of shipping and other activities in the dangerous, remote waters. In addition, continuing lack of clarity as to the interaction of the high seas regime with the regime for the outer continental shelf will eventually lead to disputes between coastal and non-coastal States.

The most effective manner of protecting the rights and interests of all States in this area is to adopt an international treaty regime, open to all States, governing that part of the Arctic Ocean that lies beyond national jurisdiction. Such a regime could incorporate the best of the ATS into one agreement adopting a cross-sectoral, ecosystem-based, precautionary approach to management and embodying modern conservation and management principles, including the need for environmental impact assessments of all activities to be carried out in the area. In short, what is envisaged is an Arctic Ocean regional oceans management organization (ROMO), having plenary jurisdiction over fisheries, scientific research, navigation, bioprospecting and all other high seas activities and uses, and acting as moderator between the interests of the coastal States and those of the international community. The objective of the organization would be to adopt cooperative measures for adaptive management of Arctic Ocean ecosystems and biological resources in the face of what is now accepted to be rapid, unnatural climate change and to promote adaptation of these marine ecosystems to climate change. The establishment of such an organization would present a unique opportunity for the international community to both engage in and benefit from marine scientific research and monitoring on climate change processes of global as well as regional interest, and to ensure precautionary, ecosystem-based management of an extremely vulnerable and, as yet, little investigated, poorly understood and non-exploited marine ecosystem. Pending establishment of such an organization, the international community could consider adopting a voluntary moratorium on all activities in, on and under the central Arctic Ocean, other than internationally peer-reviewed marine scientific research carried out pursuant to strict environmental impact assessment and monitoring guidelines, including activities carried out by the five Arctic Ocean coastal States.

Although undoubtedly considered by some at worst fanciful or, at best, possibly merely premature, history shows that precautionary-minded international agreements are easier to reach before vested interests have become entrenched. In some respects it may already be too late. OSPAR and NEAFC already cover a portion of the central Arctic Ocean. However, the OSPAR regime is essentially limited to coastal States in the region,[63] while new membership in NEAFC requires the approval of three-quarters of the contracting parties.[64] This effectively excludes the rest of the international community, including, in the case of OSPAR, some coastal Arctic States, from participation in the regime. In an ideal world, the central Arctic Ocean would be subject to only one regime. In reality, however, it is unlikely that OSPAR and NEAFC would be prepared to reduce their geographical scope. A new Arctic Ocean ROMO would therefore have to work closely with OSPAR and NEAFC to develop a sophisticated and workable *modus operandi* for ensuring not only the efficacy but also the consistency and compatibility of measures across the entire central Arctic Ocean.

However, as is clear from the experience in the Antarctic, the adoption of a governance regime alone – no matter how progressive – cannot ensure the conservation and long-term sustainability of marine biodiversity in the face of inadequate participation, implementation and compliance. In adopting a new regime for the Arctic, new solutions will need to be devised aimed at overcoming the design and implementation shortcomings of the ATS and its constituent agreements, including their reliance on flag State or national enforcement jurisdiction and their limited application to States parties only. Thus while the ATS may, indeed, be a model for the high seas of the central Arctic Ocean, a ROMO responding to the climate change-induced challenges to the Arctic should go beyond the ATS model to a truly integrated, holistic, cross-sectoral agreement enforceable by and on behalf of the international community.

In the Antarctic, improvement of the legal regime requires the strengthening of regulatory efforts to manage Antarctic marine ecosystems under circumstances of uncertainty. These circumstances include IUU fishing as well as climate change-related uncertainties. CCAMLR has recently agreed to undertake a performance review,[65] to be conducted by a panel

[63] See OSPAR Convention, n. 44 above, Article 25.

[64] See the new NEAFC Convention, n. 41 above, Article 20.

[65] The review was agreed to by the Commission at its meeting in October – November 2007. The review implements a call for performance reviews of regional fisheries management organizations made by the Review Conference of the UN Fish Stocks Agreement. See Report of the Review Conference on the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, held in New York from 22–26 May 2006 (UN Doc. A/CONF.210/2006/15, 5 July 2006).

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including external and internal experts and a non-governmental organization representative. The report will be considered at the next meeting of the commission in 2008 and is expected to provide a template to both improve CCAMLR's best practice performance and provide guidance for filling gaps where its practice is not up to best practice standards.

However, beyond reviewing its past performance, the time is approaching when CCAMLR will need to genuinely implement its ecosystem management approach for all marine biodiversity, not just for fisheries management purposes. Much work will need to be done by CCAMLR to adequately factor other effects of climate change, such as ocean acidification and warming, into its management strategies. In addition, as ecological boundaries, including the location of the Antarctic Convergence, change and species migrate south, CCAMLR will need to develop close working relationships with other regional fisheries organizations whose geographical boundaries border the CCAMLR area, such as the Commission on the Conservation of Southern Bluefin Tuna, to ensure appropriate protection of all Antarctic marine biodiversity. Even the anomalous situation of Antarctic whaling may fall to CCAMLR to deal with. It will be recalled that whaling was excepted from the CCAMLR Convention[66] on the basis that it was regulated by an earlier treaty, the International Convention for the Regulation of Whaling. However, the ongoing stand-off in the International Whaling Commission (IWC) between pro- and anti-whaling States has led to calls for the termination of the IWC and the negotiation of a new agreement.[67] In theory, CCAMLR is the appropriate body to manage whaling activities in the Antarctic. In reality, whaling States in CCAMLR will be likely to block any consensus on agreement to regulate the activity. The implications of a breakdown in CCAMLR over the issue cannot be ignored.

CCAMLR will also need to address its relationship with the International Seabed Authority and the governance regime for the international deep seabed (the 'Area') to definitively determine which organization will take jurisdiction over marine biodiversity on and under the deep seabed. With differing memberships and objectives, tensions between the two organizations can be expected. In addition, as coastal Antarctic claimant States present their submissions for extended continental shelves off the continent, CCAMLR will have to deal with the issue of jurisdiction over marine biodiversity on the extended continental shelf. While CCAMLR is, *prima facie*, the appropriate body to regulate exploitation of marine biodiversity on both the extended continental shelf and the deep seabed of the Antarctic, claimant coastal States may work to block its attempts to do so.

Finally, a significant challenge for CCAMLR is one of ensuring improvement in the development and implementation of the ATS regime to protect marine biodiversity from both over-exploitation and the effects of increasing human activities such as shipping and tourism. As vividly demonstrated by the sinking of the tourist vessel the *M/V Explorer* in November 2007, these activities bring with them, in addition to the risk to human life, the risk of marine pollution and introduction of invasive alien species and their attendant detrimental effects on marine biodiversity. CCAMLR should lead the way within the ATS and in other international fora in adopting and/or pressing for the adoption of regulations governing all human activities in the Southern Oceans which have or may have adverse effects on the conservation and long-term sustainability of marine biodiversity.

CONCLUSION

The polar oceans in ABNJ are unique and extremely vulnerable ecosystems about which relatively little is known. Protecting polar marine biodiversity is not just a matter of regulating its exploitation. Rather, it encompasses all aspects of protection of the marine environment from the deleterious effects of all human activities, including pollution, destructive fishing or exploitation practices, marine scientific research and the introduction of invasive alien species. In the Antarctic, a legal framework for this protection, albeit an imperfect and imperfectly implemented one, already exists. While this should not be cause for complacency, the Antarctic situation stands in stark contrast with the situation in the central Arctic Ocean.

From an international law standpoint, the most important outcome of the International Geophysical Year of 1958–1959 was the adoption of the Antarctic Treaty. The international community should similarly utilize the current IPY not only to learn more about the marine biodiversity that exists at both poles, but also to pledge to its better conservation and management. This can be accomplished at both ends of the globe with a commitment to multilateral approaches incorporating the best and latest knowledge and standards for conservation and sustainable management of

[66] CCAMLR Convention, n. 52 above, Article VI states that: 'Nothing in this Convention shall derogate from the rights and obligations of Contracting Parties under the International Convention for the Regulation of Whaling and the Convention on the Conservation of Antarctic Seals'.

[67] For a discussion of the issues see D. Currie, 'Whales, Sustainability and International Environmental Governance', 16:1 *RECIEL* (2007), 45.

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marine biodiversity. For the Antarctic, it is a matter of strengthening what is already there. For the Arctic, an outcome of this IPY should be the adoption of an international agreement, which recognizes the legitimate interests of non-Arctic States in the conservation and management of marine biodiversity in the central Arctic Ocean ABNJ.

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Annex 521

S. C. McCaffrey, "Introductory note to the Convention on the Law of the Non-navigational Uses of International Watercourses", *United Nations Audiovisual Library of International Law*, 30 June 2008

CONVENTION ON THE LAW OF THE NON-NAVIGATIONAL USES OF INTERNATIONAL WATERCOURSES

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The 1997 United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses is the only treaty governing shared freshwater resources that is of universal applicability. It is a framework convention, in the sense that it provides a framework of principles and rules that may be applied and adjusted to suit the characteristics of particular international watercourses. This introductory note will describe the historical background of the convention and significant developments in its negotiating history. It will then summarize the key provisions of the convention and, finally, touch upon its influence on subsequent legal developments, including both treaties and jurisprudence.

Historical Background

The Convention was concluded on 21 May 1997, as an annex to General Assembly resolution 51/229. Its adoption brought to a close a process the General Assembly had initiated well over two decades earlier. On 8 December 1970, the General Assembly adopted resolution 2669 (XXV), entitled "Progressive Development and Codification of the Rules of International Law Relating to International Watercourses". In that resolution, the Assembly recommended that the International Law Commission "take up the study of the law of the non-navigational uses of international watercourses with a view to its progressive development and codification." In fact, the General Assembly had shown that it recognized the importance of this field over ten years earlier, when it adopted resolution 1401(XIV) on 21 November 1959. In that resolution, the Assembly had indicated that it was "desirable to initiate preliminary studies on the legal problems relating to the utilization and use of international rivers with a view to determining whether the subject is appropriate for codification".

The International Law Commission began work on the international watercourses topic in 1974 pursuant to the General Assembly's 1970 resolution. Over the course of the next twenty years, the Commission's work was guided by a succession of five special rapporteurs: Richard Kearney, Stephen Schwebel, Jens Evensen, Stephen McCaffrey, and Robert Rosenstock. Following its usual practice, the Commission in 1974 circulated a questionnaire to United Nations Member States seeking their views on various issues related to the watercourses topic.

In 1976, the Commission decided that it was not necessary to determine the scope of the expression "international watercourse" at the outset of its work; in fact, the Commission did not define this expression until it adopted on first reading a full set of draft articles on the topic in 1991. The definition adopted in that year is substantially unchanged in the Convention. In 1994, the Commission concluded its work on international watercourses, adopting a complete set of 33 draft articles on second reading. The Commission also adopted a companion resolution on confined transboundary

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groundwater, which recommended that States be guided by the principles contained in the draft articles in regulating this form of groundwater. The Commission submitted its final draft and the resolution to the General Assembly with a recommendation that a convention be elaborated on the basis of the draft articles.

On the recommendation of the Sixth (Legal) Committee, the General Assembly decided in 1994 to "convene a Working Group of the Whole . . . to elaborate a framework convention on the law of the non-navigational uses of international watercourses on the basis of the draft articles adopted by the International Law Commission." The convention was negotiated in the Sixth Committee, convening for this purpose as a "Working Group of the Whole" as contemplated by the Assembly's 1994 resolution. The Working Group met for three weeks in October of 1996 and two weeks in March and April of 1997. As already noted, the Convention was adopted on 21 May 1997.

Summary of the Convention's Key Provisions

The Convention contains 37 articles arranged in seven parts: Part I. Introduction; Part II. General principles; Part III. Planned measures; Part IV. Protection, preservation and management; Part V. Harmful conditions and emergency situations; Part VI. Miscellaneous provisions; and Part VII. Final clauses. An annex to the Convention sets forth procedures to be followed in the event that States have agreed to submit a dispute to arbitration.

While it is difficult to single out particular provisions of the Convention, based on the preparatory work in the International Law Commission, the negotiations in the Working Group and the significance of the principles involved, it may be said that the Convention's key provisions are contained in Parts I, II, III and IV. Part I contains the definition of the expression "international watercourse," which is obviously of central importance. Article 2 defines the term "watercourse" broadly as "a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus". It will be noted that, importantly, this definition includes groundwater that is hydrologically connected with surface water, which is in fact the case for much of the world's groundwater. The expression "international watercourse" is then defined as "a watercourse, parts of which are situated in different States".

Article 5, contained in Part II, reflects the principle that is widely regarded as the cornerstone of the Convention, and indeed the law in the field: equitable and reasonable utilization and participation. It requires that a State sharing an international watercourse with other States utilize the watercourse, in its territory, in a manner that is equitable and reasonable *vis-à-vis* the other States sharing it. In order to ensure that their utilization of an international watercourse is equitable and reasonable, States are to take into account all relevant factors and circumstances. An indicative list of factors and circumstances is contained in article 6. Article 5 also sets forth, in paragraph 2, the principle of equitable participation. According to this principle, States are to "participate in the use, development and protection of an international watercourse in an equitable and reasonable manner". Thus, affirmative conduct may be required by this principle, which is a further elaboration of the implications of equitable and reasonable utilization.

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Another key provision of the Convention is article 7 (Obligation not to cause significant harm). This article requires that States "take all appropriate measures to prevent the causing of significant harm" to other States sharing an international watercourse. The emphasis on prevention is important, since it is often difficult to stop or modify an activity once it has begun, and it can be very complicated and expensive, if indeed it is possible, to remedy harm once caused. While there has been debate, both in the negotiation of the Convention and in the literature, about the relationship between the principles set forth in articles 5 and 7, the two are best seen as being complementary. The two articles work in tandem in the following way: if a State believes it has sustained significant harm due to a co-riparian State's use of an international watercourse, it will ordinarily raise the issue with the second State. In the negotiations that follow, articles 5, 6 and 7 in effect provide that the objective is to reach a solution that is equitable and reasonable with regard to both States' uses of the watercourse and the benefits they derive from it. The possibility that the solution may include the payment of compensation, to achieve an equitable balance of uses and benefits, is not excluded.

Part III of the Convention sets forth the principle of prior notification of planned measures and elaborates in some detail on the various aspects of that obligation. The essence of the principle is that if a project or other measures are planned in a State and those measures may have a significant adverse effect upon another State or States sharing an international watercourse, the State in which the measures are planned must provide timely notification to the other States of the plans. If the notified States believe the planned measures would be inconsistent with the requirements of articles 5 or 7, a process of consultations and, if necessary, negotiations follows which is intended to lead to an equitable resolution of the situation.

Part IV of the Convention deals with protection, preservation and management of international watercourses. It contains provisions on protection and preservation of watercourse ecosystems, prevention, reduction and control of pollution, and consultations concerning management of an international watercourse, among others. The importance of these provisions is perhaps obvious: watercourse ecosystems and watercourses themselves must be protected, preserved, and properly managed, if they are to support human and other forms of life.

The Influence of the Convention on Subsequent Legal Developments

The Convention and its preparatory work have had significant influence. Four months after it was concluded, the International Court of Justice referred to and quoted from the Convention in its judgment in the *Gabčíkovo-Nagymaros Project* case (*I.C.J. Reports 1997, paragraph 85*). In part because of its provenance, the Convention is widely viewed as a codification of customary international law with respect to at least three of the obligations it embodies, namely equitable and reasonable utilization, prevention of significant harm, and prior notification of planned measures. These and other provisions of the Convention have influenced the negotiation of treaties concerning international watercourses, as can readily be seen from even a cursory review of recent agreements, for example, the Revised Protocol on Shared Watercourses of the Southern African Development Community (SADC) of 7 August 2000.

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Conclusion

The 1997 United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses represents an important contribution to the strengthening of the rule of law in this increasingly critical field of international relations and to the protection and preservation of international watercourses. In an era of increasing water scarcity, it is to be hoped that the Convention's influence will continue to grow.

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Annex 522

M. Montjoie, *The Concept of Liability in the Absence of an Internationally Wrongful Act,* in THE LAW OF INTERNATIONAL RESPONSIBILITY, eds. James Crawford et al. (Oxford University Press, 2010)

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Part III The Sources of International Responsibility, Ch.34 The Concept of Liability in The Absence of an Internationally Wrongful Act

Michel Montjoie

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(p. 503) Chapter 34 The Concept of Liability in The Absence of an Internationally Wrongful Act

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Although the legal regime and mechanisms for State responsibility for internationally wrongful acts are well-established (in practice by international case law and in theory by academic writings as well as the work of the ILC), the notion of a regime of (State) responsibility in the absence of an internationally wrongful act is far from clear: indeed, the very existence of this liability is disputed, at least as a customary principle. Commentators have employed the terms ‘liability without fault’, ‘liability for risk’, ‘objective liability’, ‘causal liability’, ‘strict liability’, ‘absolute liability’, and ‘liability *sine delicto*’. These different terms are not always synonymous but nonetheless they all corre spond to a concept of liability without breach. Each of these terms is best adapted to a particular context, but the term ‘objective liability’ will be used in the present Chapter, as a generic term.

(p. 504) 1 The utility of a specific regime: objective liability

(a) History

Around the end of the 19th century, it first became apparent that activities not prohibited by domestic law could, nonetheless, cause injury to persons and/or property in the absence of fault by the author of the act. Technological expansion, especially in the latter half of the 20th century, caused this problem to appear on the international level. Domestic legal

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systems developed regimes of liability without fault, but these were not sufficiently homogenous to support a general principle of law.

Although technological advances enabled considerable economic progress, it created activities capable of increasing damage. These activities could have been prohibited, but this prohibition would have stifled economic expansion which is beneficial to humanity as a whole. At the beginning of the industrial revolution, society accepted this risk, partly because the injuries were not catastrophic, though they might be significant. The presence of a risk of transboundary harm has led to reflection at the international level as to liability in the absence of either breach by the State providing the framework for the activity (which is generally the case for dangerous activities) or breach by the operator. This reflection has focussed on two issues: prevention in order to avoid (or reduce) injury and reparation in case of injury.

The utility of codifying principles of customary international law, insofar as they establish a customary regime of international liability in the absence of a wrongful act, was clear. Commentators were divided, however, as to the character of such a regime. Certain commentators, such as Jenks in 1966, appealed for a regime of objective liability in the case of high-risk activities (ultra-hazardous activities);[1] while others, such as Dupuy in 1976, envisaged only a limited use of this liability, purely by treaty.[2] For his part, within the ILC, Special Rapporteur Ago proposed, in 1970, to distinguish responsibility for a wrongful act from that 'arising out of the performance of certain lawful activities'.[3] Under this guise the subject of 'International liability for injurious consequences arising out of activities not prohibited by international law' was placed on the ILC's programme of work in 1978.[4]

While not referring exclusively to the ILC's work on international liability for injurious consequences arising out of activities not prohibited by international law,[5] the present Chapter will take into account the detailed reflections carried out within the ILC since the creation of a Working Group on the subject in 1978.[6]

(b) The aim of objective liability

The aim of objective liability is to put in place mechanisms which prevent a situation where victims have no recourse to compensation for injury. Since the activity which causes the injury is not prohibited, one cannot contemplate sanctions (which might prohibit the (p. 505) activity) or countermeasures. There remains the possibility of reparation, which will most often be constituted by compensation, although in the case of environmental harm the priority (albeit rarely possible) is restoration. The objective, therefore, is to define rules of reparation. For this it is necessary that an obligation to compensate exist. Compensation must not become, under the pretext that the activity is not prohibited, a substitute for prevention and mitigation of damage.[7] The rules of objective liability cannot, therefore, be separated from rules of prevention. The theoretical structure of a complete legal regime of objective liability would, therefore, consist of a body of obligations of prevention and of reparation.

The existence of a specific regime of liability for injurious consequences arising from activities not prohibited by international law does not imply an abandonment of responsibility for internationally wrongful acts for those same activities. The regime of State responsibility for internationally wrongful acts can be defined as the entirety of the 'secondary' rules determining the legal consequences of a violation of the obligations established by the 'primary' rules. The liability arising out of activities not prohibited by international law would constitute special primary rules. In 1987 the ILC considered that:

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> [c]ontrary to State responsibility, international liability rules were primary rules, for they established an obligation and came into play not when the obligation had been violated but when the condition that triggered that same obligation had arisen,[8]

viz the harm caused. It is evident, however, that a State's failure to respect the rules surrounding these activities brings into play the mechanism of secondary rules of international State responsibility for wrongful acts. The two regimes are not conflicting, but rather they are complementary.

(c) The scope of application of objective liability

Although attempts have been made within the ILC to take injury resulting from commercial or financial activities into account, it currently seems that the scope of objective liability which is capable of giving rise to a general regime only concerns injury arising from physical activities.[9] The ILC Draft Articles, adopted in 2001,[10] on the sub-topic 'Prevention of Transboundary Harm from Hazardous Activities', in the context of the topic 'International liability for injurious consequences arising out of acts not prohibited by international law', are explicit with regard to the 'physical' nature of harms taken into account. Article 1 states, 'The present articles apply to activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences'.[11] The 2004 'Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities' adopted the same formulation.[12] However, although the 2006 draft on the same topic, adopted by the Commission, does not refer to it explicitly, the commentary to Principle 1 confirms this limitation.[13]

(p. 506) On the other hand, in the event that a State were to promise to make reparation for any transboundary harm that it might cause, it would seem more logical to conceive this as a regime of objective liability exclusively for transboundary harms arising from dangerous activities. There exist two types of dangerous activities: first, those which risk causing accidents (*hazardous activities*) and, second, those with harmful effects (*harmful activities*). The regime of objective liability sought must take into account these two types of activity.

Hazardous activities can take several forms. They may be classified according to the probability of the accident or the intensity of the harm. The establishment of a list of these risky activities, envisaged by the ILC, was not retained by the Sixth Committee.[14] Such a list is not realistic because, on the one hand, it would be difficult to make it exhaustive, and on the other, it would need to be open to constant evolution because activities may lose their 'hazardous' character or become hazardous, given new scientific discoveries.

Activities of the second type are those which create transboundary harm by cumulative effect. The most representative example is that of watercourses polluted by industrial activities below upper thresholds but which create, by cumulative effect significant harm in a third-party country 'downstream'. The classification of these activities as not prohibited by international law is at times disputed, and some treaty-based regimes have prohibited them.

If these two types of activity justify the existence of a regime of objective liability, it is for the first category, that of activities presenting some risk of accidents, that this regime appears most necessary: '[it] is, in effect, because the risk is statistically certain *and* catastrophic in its consequences that the problem of liability for activities not prohibited is of fundamental importance in international law'.[15] It remains the case, however, that the risk does not bring about the obligation to make reparation; rather it is the harm that brings that obligation into existence. The risk is taken into account by way of prevention.

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2 The search for a customary legal regime of objective liability

(a) The interest of a legal regime

The mechanism of responsibility for internationally wrongful acts has two notable consequences: first, the obligation on the State responsible to cease the wrongful conduct, in order to bring an end to the violation of the international obligation which caused the injury;[16] and second, the potential for the State responsible to discharge itself of its responsibility by involving of circumstances precluding the wrongfulness.[17]

These two consequences are not satisfactory in circumstances where the activities themselves are not prohibited: cessation is not desirable because, in general, the activity plays a part in the economic development of a country which it is proper to promote in the spirit of progress; and the possibility of invoking defences as justifications, which preclude reparation, is contrary to the goal of objective liability: '[objective liability] presents the advantages of avoiding qualifying as wrongful the conduct of a State and of adapting itself (p. 507) well to the objectives sought of prevention and reparation through the institution of legal liability in general'.[18]

(b) The difficulties of establishing such a regime

Despite the interest, and even the utility, of a general regime of liability for injurious consequences arising out of activities not prohibited by international law—and in spite of numerous initiatives, notably those of the ILC—this regime does not yet exist because of numerous difficulties which have prevented general acceptance of such rules, essentially linked to conflicts of interest and the complexity of the subject.

These difficulties are numerous, but they are not all of the same intensity. They include:

- the existence of a due-diligence rule in general international law and the application of the adage '*sic utere tuo ut alienum non laedas*' mean that 'the shadow of wrongfulness hangs permanently over the activities not prohibited'. [19] The *Island of Palmas*, [20] *Trail Smelter*, [21] *Corfu Channel*, [22] and *Lake Lanoux* [23] cases sometimes considered representative of a regime of objective liability, are in fact further examples of responsibility for wrongful acts; [24]
- the disparate practice of States makes it impossible to derive customary rules; [25]
- the environmental domain seemed favourable to privileging objective liability because of the economic and geographical scale of damage to the environment requiring reparation: international environment law seemed to be thus the driving force behind the progressive development, in the absence of codification, of this form of liability. However, it has given rise to overly-general principles and to many heterogeneous treaties, with numerous obligations which restrict the scope of objective liability in favour of responsibility for wrongful acts. The uncertainty of generalized principles is emphasized by the fact that the majority of these treaties exclude liability from their scope of application (for example, the Convention on Long-range Transboundary Air Pollution, [26] which excludes State liability for damage in a footnote to article 8), or do not even raise the question (for example, the Convention on Environmental Impact Assessment in a Transboundary Context [27]). It nonetheless remains the case that international environment law, though it has not engendered a regime of substantive law, has at least raised awareness of the utility of principles of objective liability derived from provisions of soft law;
- the impossible search for a single regime for activities undoubtedly causing injury (*harmful activities*) and for risky activities (*hazardous activities*), including also very dangerous activities (*ultra-hazardous activities*) 'which imply a risk of serious harm, on an international scale, which cannot be eliminated by the exercise of even the most attentive (p. 508) care', [28] obscures the more immediate possibility of establishing

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regimes specific to these very dangerous activities, for which there seem to be a greater convergence of domestic law from which to derive an international regime;

• having to take prevention into account in a complete regime of objective liability, a diffi culty arises as to the scope of application of this liability. Prevention only concerns risky activities and not those with definite harmful effect. In its Draft Articles of 1996, which tackle the two questions of prevention and liability, the ILC took this difficulty into account by specifying that obligations of prevention concern only risky activities [29] among the activities that were dealt with by the draft articles. [30] The first article of the 2001 draft, concerning only prevention, limits its application to risky activities (since the title of the draft concerns dangerous activities, it could also have concerned activities with noxious effects, considering that the term 'dangerous activities' is not defined). The 2006 draft dealing with the distribution of losses concerns the same area of application with a different formulation—the term 'hazardous activity' is defined as 'an activity which *involves a risk* of causing significant harm'. [31] There is thus coherence between the two drafts, but the 2006 draft leaves aside the reparation of harms arising from noxious activities.

All these considerations demonstrate the difficulty of establishing a complete regime of objective liability.

(c) The principles of a regime of objective liability

A certain number of principles can be derived from discussion in the literature and from the ILC's work on objective liability.

(i) Harm

Whereas international State responsibility is triggered by an internationally wrongful act, independent of any reference to harm,[32] objective liability can only be incurred if there is harm. But is this any type of harm, or are there applicable criteria?

On the one hand the harm must be actual. Losses owing to a potential harm do not appear to trigger objective liability, but, in reality, this is not evident because the first draft of the ar ticle 1 proposed by the Special Rapporteur in his Second Report indicated: 'These articles apply when: (*a*) activities undertaken within the territory or jurisdiction of a State give rise, beyond the territory of that State, to actual or potential loss or injury to another State or its nationals'.[33] However, in his Third Report, the Special Rapporteur made clear that the concept of 'potentiality' of loss or injury was not justified.[34] This latter stance is adopted less and less often in treaties: for example, in the domain of nuclear liability the cost of preventative measures, taken in the face of an imminent risk of a harm which does not finally occur, was excluded from the first texts but today falls within the scope of the treaty-based regime.[35]

On the other hand, it seems logical that only 'significant' harm can be taken into account. The use of standard-setting in international environment law, which sets limits (p. 509) on pollution, could justify this. Although the principle appears to be established, there remains the problem of the determination of the threshold, or, more precisely, of one or several thresholds. Academic commentators and the ILC have advanced several sometimes uncoordinated ideas. The separation of the work of the Commission between prevention and liability strictly speaking had led to the idea of a first threshold for obligations of prevention and a second, higher, threshold for the reparation of harms, notably catastrophic harms, which could constitute a complement to the desired automatic operation of objective liability. This was eventually not retained. Fixing one (or, at most, two) thresholds, indispensable for the establishment of a customary regime, cannot take into account the

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technical arrangements specific to each industrial field, once again rendering such a regime more improbable, if not impossible, even if limited to catastrophic harm.

(ii) Reparation

Full compensation of harm does not appear to be a rule of objective liability. The notion of equilibrium between the interests present means that compensation can be only partial. In 1987 the ILC specified:

> [w]hile the purpose of reparation in State responsibility was in principle to restore the legal condition that had existed prior to the commission of the wrongful act, compensation under the present topic was determined by reference to a number of factors and might or might not be equivalent to the actual damage suffered.[36]

This approach was maintained in the Draft Articles of 1996.[37] Nevertheless, if the reference to 'adequate compensation' in principles 3 and 4 of the 2006 draft does not imply integral reparation, it seems, following the commentaries to these principles, that the notion of an equilibrium of interests is no longer put forward and that integral reparation is normally envisaged.[38] In the domain of treaty-based objective liability, limitation of compensation was considered as complementing the elimination of the burden of proof. But this limitation has disappeared in the recent texts.[39]

(iii) Causation

Objective liability, even in its fullest sense, is not unlimited: the existence of harm does not suffice; there must be a causal link between the harm and the activity that caused it. But this link is sometimes difficult to prove, notably when there is a plurality of origins: for example, in the case of pollution of rivers or the atmosphere by cumulative effect. Within the work of the ILC certain views were expressed in favour of a 'presumption of a reasonable causal link'.[40]

(iv) Defences

The defence of supervening event, present in domestic legal systems, results in a partial or total exemption from the obligation to make reparation on the part of the author of the harm. The principal causation defences are act of God, action of a third party, or action of the victim.

(p. 510) The transposition of causation defences from domestic legal systems to the domain of international objective liability poses difficulties.[41] At a theoretical level, one could argue that there can be no defences because in objective liability it is the harm (and it alone) which triggers the liability of the author. The term 'absolute liability', employed by academic commentators, would signify the total absence of defences. But although a general regime of objective liability does not yet exist, it seems that some defences exist in favour of the author of the harm.

On the other hand, these defences exist explicitly in treaty-based regimes. They generally concern the existence of an armed conflict, in the broad sense (a type of action of a third party); of an exceptional natural catastrophe (a type of frustration); of negligence of the party asking for reparation; or of an action of a third party. But the current tendency in the drafting of treaties is towards a reduction of the number of available defences.[42]

(v) Attribution

A necessary condition for the attribution of a harm to a State in the context of objective liability is proof that the activity which has caused the harm falls within the jurisdiction or under its control (the attribution is, then, 'territorial'); in contrast to the attribution of

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responsibility for internationally wrongful acts, which rests upon the attribution of conduct to a State, subject to several conditions.[43]

But the activities discussed in the present chapter are, for the most part, carried out by private persons. Even if certain of these highly technological activities play a privileged role in the rapid development of a State—or, sometimes, are even carried out by the State itself — this consideration does not permit the automatic attribution of State liability. In the context of the search for a general regime of objective liability the question arises 'whether one could attribute to the State an activity liable to cause technological or industrial harms simply because these harms would be catastrophic'[44]. No positive response has yet been given.

The ILC's response to this question has evolved. First, it gave a positive response to the question, without even limiting attribution to the single case of catastrophic harm, as shown in article 3 (Attribution) of the Draft Articles presented by the Special Rapporteur in 1988,[45] the title of which became 'Assignment of obligations' in 1989 in order to distinguish it from State responsibility for internationally wrongful acts:[46] but this automatic attribution to the State disappears in article 5 (Liability) of the Draft Articles of 1996.[47] The 'Draft principles on the allocation of transboundary harm arising out of hazardous activities', adopted by the ILC in 2006[48] seem to abandon objective State liability and shift it to the operator.[49]

In the domain of treaty-based regimes, this question has been resolved by the channelling of liability, by which the signatory States designate who will assume the burden of reparation. This will generally be the operator of the installation that carries out the activity.

(p. 511) (vi) The place of prevention in objective liability

Prevention (one of the fundamental principles of international environment law) is the centrepiece of objective liability as set out above.[50] But this represents only one aspect of it: the other aspect, of utmost importance, being reparation.

But the value of prevention recognized in custom (not only in the domain of the environment) entails the non-respect of a obligation of prevention on the part of the State which constitutes a wrongful act, for which international responsibility arises, rather than objective liability. Objective liability can, therefore, only be conceived where there is no violation of an obligation of prevention.

The Draft Articles on Prevention of Transboundary Harm From Hazardous Activities adopted by the ILC in 2001[51] is a useful text, but only constitutes a codification of existing international law[52] and does not contribute to the elaboration of a regime of objective liability.

(d) The domain of treaty-based regimes

The difficulties encountered and the uncertain character of the specific principles mean that it has not been possible to establish a general text in response to concerns of States or of their nationals. The only practical legal way forward is, therefore, by treaty, based on the will of States to resolve a specific problem. These treaties have a character which is either universal, regional or bilateral.

The majority of treaties establish rules of liability channelling liability to the operator of the activity (a term which is identified in each convention) or to the polluter, which is not always the operator.[53] At most, a State intervenes only by a system substituting it for the

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operator, either in the case of shortcomings in the operator's guarantees, or in order to increase the cap on the amount of compensation to be paid by the operator.[54]

The only treaty instituting objective State liability is the Convention on International Liability for Damage Caused by Space Objects.[55]

With regard to the notion of a threshold of damage below which liability will not be incurred, treaty-based regimes do not adopt a single position. Article 8 (exemptions) of the European Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment,[56] provides in paragraph (d) that the operator shall not be liable for damage which he proves 'was caused by pollution at tolerable levels under local relevant circumstances'. This provision can be interpreted as referring to a threshold of damage.[57] On the other hand, the majority of treaties concerning liability for harm make no mention of a threshold, so these treaties may be considered as applying no matter the intensity of the damage.[58] The only references to a threshold figure in the latest revisions of treaties concerning nuclear liability concern measures relating to harm to the environment.[59]

(p. 512) Treaty-based regimes do not in general contribute to a complete regime of objective liability which incorporates both prevention and reparation, since objective liability to make reparation becomes a substitute for a neglected obligation of prevention. Treatybased regimes are also of limited value because they only bind State parties, and the number of parties to treaties of universal application remains low.

3 Conclusions

The concept of objective liability now seems to be accepted in international law (having existed in domestic law for a long time), but the establishment of a general regime is still a long way off. Two conflicting tendencies conspire to prevent the establishment of such a regime.

First, treaty-based regimes have adopted the principle of reparation for harm arising out of an activity not prohibited by international law. The multiplicity of treaties based on this principle could establish it as custom. Similarly, for certain commentators, the development of the method of *ex gratia* payments militates in favour of a general rule of reparation.[60] However, in the majority of examples of *ex gratia* compensation, the harm was manifestly due to the violation of an international obligation.[61] Other commentators dispute that this kind of practice can contribute to a general rule.[62] In the domain of ultra-hazardous activities the more consensual acceptance of objective liability has led Barboza, citing the report of the Brutland Commission, to admit that this generalized acceptance could engender a general principle of law recognized by civilized nations, which, according to article 38(1)(c) of the Statute of the ICJ, constitutes a source of international law.[63]

But on the other hand, States have avoided establishing rules of prevention (inevitably linked to rules of reparation) because of the possibility that it might lead to an obligation to make unlimited reparation of all harm caused by activities not prohibited by international law. For this reason, States are not prepared to accept a general text on rules of prevention, such as the one adopted by the ILC in 2001, and therefore the adoption of a complete regime of objective liability seems unlikely. More generally, '[b]ecause the injurious activities in question are paradigmatically hazardous, governments do not want to prejudge now by their conduct grievances that, tomorrow, perhaps, one could well direct at them'.[64]

Unfortunately it seems that the general principles of objective liability derived from the work of several international organizations, and especially the works of the ILC, will remain at the level of recommendations. Their utility in public international law is not, however, negligible.

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(p. 513) Further reading

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Ph Cahier, ‘Le problème de la responsabilité pour risque en droit international’, in IUHEI, *Les relations internationales dans un monde en mutation* (Leiden, Sijthoff, 1977) 409

CG Caubet, ‘Le droit international en quête d’une responsabilité pour les dommages résultant d’activités qu’il n’interdit pas’ (1983) 29 *AFDI* 99

P-M Dupuy, ‘L’Etat et la réparation des dommages catastrophiques’, in F Francioni et al (eds), *International Responsibility for Environmental Harm* (Dordrecht, Nijhoff, 1991), 125

P-M Dupuy, ‘A propos des mésaventures de la responsabilité internationale des Etats dans ses rapports avec le protection internationale de l’environnement’, in *Mélanges Alexandre Kiss* (Frison-Roche, 1998), 269

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G Handl, ‘State Liability for Accidental Transnational Environmental Damage by Private Persons’ (1980) 74 *AJIL* 525

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1 CW Jenks, ‘Liability for Ultra-Hazardous Activities in International Law’ (1966) 117 *Recueil des cours* 176.

2 P-M Dupuy, *La responsabilité internationale des Etats pour les dommages d’origine technologique et industrielle* (Paris, Pedone, 1976), 256.

3 R Ago, Second Report on State Responsibility, *ILC Yearbook 1970*, Vol II, 178, para 6.

4 Report of the ILC, 30th Session, *ILC Yearbook 1978*, Vol II(2), 150, para 177.

5 See Chapter 10.

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6 Report of the ILC, 30th Session, *ILC Yearbook 1978*, Vol II(2), 6, para 9.

7 RQ Quentin-Baxter, Second report on international liability for injurious consequences arising out of acts not prohibited by international law '[Compensation] should not be allowed to become a tariff for causing avoidable harm', *ILC Yearbook 1981*, Vol II(1), 103, 123 (para 91).

8 *ILC Yearbook 1987*, Vol II(2), 43, para 146.

9 A/CN.4/510, 2000, 9, para 15.

10 Report of the ILC, 53rd Session, 2001, A/56/10, 369, para 91.

11 Ibid, 371.

12 Report of the ILC, 56th Session, 2004, A/59/10, 153 (para 175).

13 Report of the ILC, 58th Session, 2006, A/61/10, Principle 1, Commentary 4, 117.

14 A/CN.4/437, 1991, 79, para 26.

15 CG Caubet, 'Le droit international en quête d'une responsabilité pour les dommages résultant d'activités qu'il n'interdit pas' (1983) *AFDI* 99, 105.

16 Art 30, ARSIWA.

17 Part One, Chapter V, ARSIWA.

18 J Barboza, 'La responsabilité "causale" à la Commission du droit international' (1988) *AFDI* 513, 516, para 14.

19 CG Caubet, 'Le droit international en quête d'une responsabilité pour les dommages résultant d'activités qu'il n'interdit pas' (1983) *AFDI* 99, 107.

20 (1928) 2 *RIAA* 829.

21 (1941) 3 *RIAA* 907.

22 *ICJ Reports 1949*, p 4.

23 (1957) 12 *RIAA* 281.

24 See notably P-M Dupuy, *La responsabilité internationale des Etats pour les dommages d'origine technologique et industrielle* (Paris, Pedone, 1976), 189.

25 See the study carried out by the Secretariat of the ILC, A/CN.4/384 (1984).

26 13 November 1979, 18 *ILM* 1442.

27 25 February 1991, 30 *ILM* 800.

28 CW Jenks, 'Liability for Ultra Hazardous Activities in International Law' (1996) 117 *Recueil des cours* 10 5, 195.

29 *ILC Yearbook 1996*, Vol II(2), Annex I, 118.

30 Ibid, 103.

31 A/61/10, 107 (emphasis added).

32 Art 1 and 2, ARSIWA.

33 RO Quintin-Baxter, Second Report on International Liability, *ILC Yearbook 1981*, Vol II(1), 103, 123, para 93.

34 RO Quintin-Baxter, Third Report on International Liability, *ILC Yearbook 1982*, Vol II(1), 51, 59, para 35.

35 See Chapter 60.

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36 *ILC Yearbook 1987*, Vol II(2), 43, para 146.

37 Art 21 (Nature and extent of compensation or other relief), Report of the ILC, 48th Session, 1996, A/51/10, 130–131.

38 A/61/10, 140–166.

39 See Chapter 60 for the example of nuclear harm.

40 A/CN.4/540, 2004, 9.

41 P-M Dupuy, *La responsabilité internationale des Etats pour les dommages d'origine technologique et industrielle* (Paris, Pedone, 1976), 249–255.

42 See Chapter 60 for the nuclear domain.

43 Part One, Chapter II, ARSIWA.

44 P-M Dupuy, *La responsabilité internationale des Etats pour les dommages d'origine technologique et industrielle* (Paris, Pedone, 1976), 236.

45 J Barboza, Fourth Report on International Liability, *ILC yearbook 1988*, Vol II (2), 251, 254 (para 17) and 261 (para 60).

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47 *ILC Yearbook 1996*, Vol II(2), Annex I, 111.

48 Report of the ILC, 58th Session, 2006, A/ 61/10, Chapter V, 101.

49 Ibid, Principle 4.

50 See Chapter 36 for the content of obligations of prevention.

51 Report of the ILC, 53rd Session, 2001, A/56/10, Chapter V, 366–436.

52 P Birnie, A Boyle, & C Redgwell, *International Law and the Environment* (2nd edn, Oxford, OUP, 2009), 189–190.

53 On the polluter-pays principle see Chapter 56.

54 See eg the treaties concerning nuclear energy, discussed in Chapter 60.

55 29 November 1971, 961 *UNTS* 187. See Chapter 59.

56 21 June 1993, ETS No 150.

57 J Barboza, 'International Liability for the Injurious Consequences of Acts not Prohibited by International Law and Protection of the Environment' (1994) 247 *Recueil des cours* 301, 379.

58 P-M Dupuy, *La responsabilité internationale des Etats pour les dommages d'origine technologique et industrielle* (Paris, Pedone, 1976), 221.

59 See Chapter 60.

60 CG Caubet, 'Le droit international en quête d'une responsabilité pour les dommages résultant d'activités qu'il n'interdit pas' (1983) 29 *AFDI* 116.

61 For example, the 1954 Fukuryu Maru case: see R Lefeber, *Transboundary Environmezntal Interference and the Origin of State Liability* (The Hague, Kluwer, 1996), 166–168.

62 See P Birnie, A Boyle, & C Redgwell, *International Law and the Environment* (2nd edn, Oxford, OUP, 2009), 179.

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63 See J Barboza, ‘International Liability for the Injurious Consequences of Acts not Prohibited by International Law and Protection of the Environment’ (1994-III) 247 *Recueil des cours* 301, 346–347.

64 P-M Dupuy, ‘L’Etat et la réparation des dommages catastrophiques’, in F Francioni et al (eds), *International Responsibility for Environmental Harm* (Dordrecht, Nijhoff, 1991) 125, 142.

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Annex 523

G. Gaja, *States having an Interest in Compliance with the Obligation Breached,* in THE LAW OF INTERNATIONAL RESPONSIBILITY, eds. James Crawford et al. (Oxford University Press, 2010)

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Part V The Implementation of International Responsibility, Ch.64 States having an Interest in Compliance with the Obligation Breached

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(p. 957) Chapter 64 States having an Interest in Compliance with the Obligation Breached

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While article 42 ARSIWA concerns the invocation of responsibility by States specially affected by the breach of an international obligation owed to a group of States or the international community as a whole, article 48 concerns the situation of States other than injured States, but to whom the obligation breached is also owed. The term ‘injured State’ could be used also in relation to this category of States, for they are also affected by the breach. But the ARSIWA, with a choice of terminology that may be regarded as questionable, call ‘injured States’ only those States falling within the categories outlined in article 42. In any event, what seems important is the entitlement which the States referred to in article 48 benefit from, rather than the term employed to define these States.

1 Breach of erga omnes and erga omnes partes obligations

When an obligation is owed by a State to all other States (which is implicit in the indication that ‘the obligation breached is owed to the international community as a whole’) or to all the other States parties to a treaty, all those States are necessarily affected by a breach of that obligation. In this respect, it is possible to speak of a breach of an obligation *erga omnes* or of an obligation *erga omnes partes*, respectively. These are expressions that are not always understood in the same way and ARSIWA do not use them: the only Latin words in ARSIWA (*lex specialis*) appear in the text of article 55. But the expression ‘obligations *erga omnes*’, already classical, is found in the Commentary to the Articles, where the famous passage of the International Court of Justice’s judgment in *Barcelona Traction*—the case which launched the term—is reproduced.[1] Reference is made to the Court’s incidental mention of ‘obligations of States towards the international community as a whole’ and to the remark according to which, ‘in view of the importance of the rights involved, all States (p. 958) can be held to have a legal interest in their protection; they are obligations erga omnes’.[2] The Court took examples from:

> the outlawing of acts of aggression, and of genocide, as also from the principles and rules concerning the basic rights of the human person, including protection from slavery and racial discrimination.[3]

In relation to the breach of some of these obligations, there is no State that may be considered as injured. This is the case, for instance, of the obligation to protect the fundamental rights of the human person. The injured subjects in this case are the individuals concerned; only if they are foreigners in relation to the State responsible for the breach, one could argue that their national State is specially affected by the breach.

In other cases, as has been mentioned in respect of article 42, there is an injured State: for instance, in the case of aggression, the State which was the object of the aggression is assimilated to the State to whom a bilateral obligation is due. But the position of States other than the injured State is not in principle different from that which would apply in the absence of an injured State. Since the obligation is owed to all States or all the States party to a treaty, all these States are necessarily affected. They are affected directly, for the obligation breached is owed to them as well: the terminology of ‘indirect injury’, sometimes used, is inappropriate since it evokes, in the presence of an injured State, the idea that an

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indirect injury depends on a direct injury; it is even less adequate when no State may be considered as injured.

Article 48 establishes the right of the States to whom the obligation is owed, but who do not fall within the category of injured States, to invoke the responsibility of the State author of the breach. Although the definition of the categories of injured States in article 42 renders the identification of the other cases in which the obligation is owed unnecessary, article 48 describes in a pedagogical way the cases in which a State which is not injured in the sense of article 42 is entitled to invoke responsibility.

Article 48(1)(b) incorporates the situations mentioned by the International Court of Justice in *Barcelona Traction*: that is the case of breach of obligations 'owed to the international community as a whole'. The reference of the Court to the 'international community as a whole' concerns all States other than the responsible State, and not a superior and distinct entity. The situation has not evolved much since the judgment, other than in the growing tendency to admit that certain subjects other than States also form part of the international community. It would thus be difficult to maintain that responsibility can only be invoked by 'a distinct entity', situated above States.[4] Further, it does not follow from the articles that in cases of breach of *erga omnes* obligations States can invoke responsibility only collectively. If this were so, the significance of article 48 would be drastically limited.

Insofar as the reaction to a breach is taken by the organized international community within the framework of the United Nations, the initiatives that a State could take against the responsible State would be restricted. Similarly, interferences could also result from the Security Council taking measures without specific consideration for the existence of a breach of the obligation. These possible restrictions are recalled, although in a synthetic manner, in article 59, which in a 'without prejudice' provision refers to the Charter of the United Nations.

(p. 959) The breach of obligations *erga omnes*, or rather a sub-category of these obligations, is also addressed in another provision: article 40, concerning the 'serious breach … of an obligation arising from a peremptory norm of general international law'. The term used in this provision underlines the importance of the content of the rule for the international community and in consequence the seriousness of a breach, whereas the reference to the international community in article 48 indicates that the obligation is owed by a State to all other States. This is explained by the fact that articles 40 and 41 deal with the consequences of the unlawful act, whereas article 48 concerns the invocation of responsibility, thus specifying which States are entitled to invoke it. Even if there are diverging views about the relation between peremptory norms and rules imposing obligations *erga omnes*, it is clear that the latter comprise peremptory norms in the sense of article 53 of the Vienna Convention on the Law of Treaties.[5] It does not seem that these provisions admit the interpretation that has been given, according to which article 40 would be a special rule excluding the applicability of article 48, and that in consequence the latter article does not apply to the invocation of responsibility for a serious breach of an obligation arising from a peremptory norm.[6]

In relation to obligations *erga omnes*, article 48 implies that States have a collective interest in compliance with the obligation. The existence of a collective interest is expressly required by article 48(1)(a), which concerns the case where the obligation breached is owed 'to a group of States' and 'the obligation is established for the protection of a collective interest of the group'. The reference in this text to the collective interest is probably intended to specify that it concerns the category of multilateral treaties (or customary rules) which establish obligations which in any specific circumstance are owed to all the other States party to the treaty (or addressees of the rule) and thus do not give rise only to a set of bilateral obligations. In other words, this is the case of obligations whose breach affects in any event all the other addressees of the international legal rule. Special

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Rapporteur Crawford suggested that even a rule that generally sets forth bilateral obligations could protect a collective interest in the case of a breach of a certain degree of seriousness.[7]

I have already pointed out, in relation to article 42, the difficulty in defining the scope of obligations imposed by a multilateral treaty. The character of the obligation can in fact give rise to controversy. It is sufficient to recall here the judgment of the International Court of Justice in the *South West Africa* cases, where the Court excluded, with the narrowest majority, the right of States formerly members of the League of Nations to invoke the responsibility of a mandatory State.[8] The commentary of the ILC maintains that article 48 'is a deliberate departure' from this judgment.[9] In fact, article 48 seems neutral in respect of the existence of a collective interest of the group concerning the obligation imposed by a multilateral treaty. The answer can only be given through the interpretation of the treaty. It would seem that what the ILC intended to say is that, in its opinion, a collective interest should have been recognized by the Court in relation to the mandate for South West Africa.

(p. 960) The ILC's approach finds some support in the separate opinion of Judge Simma in *Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v Uganda)*.[10] Part of Uganda's counterclaim had been rejected by the Court as the claim was brought by way of diplomatic protection, and Uganda had failed to prove that the relevant persons were its nationals.[11] Judge Simma expressed the view that the Court should have gone on to find that the 'victims of the attacks at the Ndjili International Airport remained legally protected against such maltreatment irrespective of their nationality, by other branches of international law, namely international human rights and, particularly, international humanitarian law',[12] and that Uganda had standing to raise such claims on their behalf.[13] Referring to article 48, he stated:

> [a]s to the question of standing of a claimant State for violations of human rights committed against persons which might or might not possess the nationality of that State, the jurisdiction of the Court not being at issue, the contemporary law of State responsibility provides a positive answer as well. The International Law Commission's 2001 draft on Responsibility of States for Internationally Wrongful Acts provides not only for the invocation of responsibility by an injured State (which quality Uganda would possess if it had been able to establish the Ugandan nationality of the individuals at the airport) but also for the possibility that such responsibility can be invoked by a State other than an injured State … The obligations deriving from the human rights treaties cited above and breached by the DRC are instances par excellence of obligations that are owed to a group of States including Uganda, and are established for the protection of a collective interest of the States parties to the Covenant.[14]

In 2006, the Court expressly noted that the existence of jus cogens or erga omnes obligations would not exclude the requirement of jurisdiction, stating:

> … the Court deems it necessary to recall that the mere fact that rights and obligations erga omnes or peremptory norms of general international law *(jus cogens)* are at issue in a dispute cannot in itself constitute an exception to the principle that its jurisdiction always depends on the consent of the parties …[15]

This does not mean that the Court could not examine the breach of one of these obligations in a context where its jurisdiction was established, for example, by a treaty.

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2 The legal position of States other than the injured State in cases of breach of obligations owed to them

The fact that the obligation breached is owed to a State entails that this State can request the cessation of the unlawful act. It is in fact an essential aspect of the existence of an obligation imposed by the primary rule. The same conclusion may be reached in respect of assurances and guarantees of non-repetition, which equally concern compliance with the (p. 961) same obligation, rather than the fulfilment of new obligations arising as a consequence of the wrongful act.

A State which has not been injured, but which may invoke the responsibility of the wrongdoing State, does so essentially in the exercise of a collective interest. It will rarely have suffered damage (moral or material) that affects it individually. This could be the case of a State which, even if its coastal and maritime areas are not affected by the consequences of pollution in the high seas, incurs expenses to combat pollution.

Normally, damage resulting from the breach of obligations *erga omnes* or obligations *erga omnes partes* does not affect any State other than an injured State, if there is one. It would be inconceivable that another State would be entitled to claim compensation for its own benefit to make reparation for damage that it has not suffered.

The question is whether a State other than the injured State would be entitled to invoke responsibility in order to request that the obligation of reparation be fulfilled. Restitution or compensation and, depending on the case, satisfaction would be claimed by any State other than the injured State, not for its own benefit, but for the benefit of the injured State or any other injured subject. Article 48(2)(b) resolves this question by allowing every State to demand 'performance of the obligation of reparation … in the interest of the injured State or of the beneficiaries of the obligation breached'. The latter case is normally that in which the obligation is owed to States and also to other subjects, like individuals and peoples. It could also be that the obligation exists only towards other States and no State is injured by its breach, but reparation is necessary in the interest of the international community. An example of this situation could be heavy pollution of the high seas which requires a form of restitution.

The solution adopted by the ILC, to allow a State other than the injured State to claim reparation, has given rise to criticism within the Sixth Committee. Mr B Ebotou, delegate of Cameroon, considered that article 48 was one of the 'aspects of the progressive development of international law which were a source of legitimate concern';[16] even stronger criticism was expressed by the Chinese delegate, H Xue.[17] The Commission admits in its commentary that the solution proposed 'involves a measure of progressive development'.[18] And yet this provision responds to practical and logical exigencies.

On the logical plane, in the absence of such provision, the responsible State could avoid fulfilling any obligation of reparation when there is no injured State. No State would in fact be able to invoke the responsibility of the wrongdoing State. In the case of heavy pollution of the high seas or unlawful harm to the ozone layer, the responsible State would have an obligation of reparation that would not be owed to any other State and would therefore remain theoretical. This would also imply that the obligations not to pollute the high seas and not to cause harm to the ozone layer would also be theoretical, for they could easily be breached without consequences. Similarly, in the case of human rights violations, at least when the violations concern nationals of the responsible State, there would be no State which could claim the reparation owed. Again, the obligation to protect human rights would not have any practical significance. It therefore seems that where an obligation is imposed

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on a State to protect a collective interest, it must follow that other States are entitled to request reparation in case of a breach of that obligation.

(p. 962) The possible presence of an injured State should not alter the legal situation of the other States to whom the obligation is owed. The injured State may claim reparation on its own account, while the other States may only make a claim for the benefit of another subject, such as the injured State.

It is true that practice shows few examples of cases in which a non-injured State has claimed the performance of the obligation of reparation. In this respect, Resolution 687 of the Security Council, concerning the damages caused by the invasion of Kuwait, constitutes an important example. It is also interesting to note that article 41 of the European Convention on Human Rights expressly allows States which bring claims to the European Court of Human Rights to request reparation for the breach of obligations suffered by individuals. Even in the case of the breach of a bilateral obligation, reparation is very rarely claimed. This results from a choice that the claimant State makes, and does not necessarily affect the principle.

The existence of a State's right to invoke international responsibility has certain implications in relation to its right to present a claim in this respect before the International Court of Justice, when a dispute arises between the State invoking responsibility and the allegedly responsible State. There is no reason to exclude this type of dispute from the application of the rules generally concerning the jurisdiction of the Court over disputes between these two States. The ILC's Commentary seems however to take a different approach, when it states that for:

> the filing of an application before a competent international tribunal, or even the taking of countermeasures … a State … should have a specific right to do so, e.g., a right of action specifically conferred by treaty, or it must be considered an injured State.[19]

This passage is closer to the position taken in certain separate and dissenting opinions by judges of the Court, insofar as it considers that one should not resolve the question of a right of action before the Court simply on the basis of the existence of a legal position corresponding to the *erga omnes* obligation.[20]

The question of the admissibility of countermeasures by a State which is not injured by the breach is even more controversial. Article 54 ARSIWA explicitly indicates that the chapter concerning countermeasures:

> does not prejudice the right of any State, entitled under article 48, paragraph 1, to invoke the responsibility of another State, to take lawful measures against that State to ensure cessation of the breach and reparation in the interest of the injured State or of the beneficiaries of the obligation breached.

The question of countermeasures by States other than the injured State arose in practice in relation to serious breaches of obligations owed to the international community as a whole, and will be analysed in this context.[21] It is however interesting to note that the 'without prejudice' clause in article 54 concerns in general all the situations covered by article 48, thus even cases where there is no serious breach. However, the clause does not imply that the problem of admissibility of countermeasures should be solved in a uniform manner in all cases where responsibility may be invoked by a State other than the injured State.

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(p. 963) In relation to the conditions for the invocation of responsibility by a State other than the injured State, according to article 48(3), the ‘requirements for the invocation of responsibility by an injured State under articles 43, 44 and 45 apply to an invocation of responsibility by a State entitled to do so under paragraph 1’. It is therefore clear that the specified requirements apply to the State invoking responsibility, whether it has suffered injury or not, without regard to the fact that the injured State may have also presented a claim.

On the basis of the reference to article 43, a State other than the injured State is also required to notify its request. The indication of the ‘form reparation should take’ does not affect the content of the obligation of the responsible State, even when this indication comes from the injured State. It seems reasonable that in principle the indication of the latter State, if there is one and if the indication exists, should prevail over that of other States, but it is not necessarily decisive.

A waiver on the part of the injured State solely affects the claim of that State. It does not prevent other States from invoking responsibility. The reference to article 45 entails only that also these other States can waive their right to invoke responsibility.

The reference to article 44, concerning admissibility of claims, is only partly appropriate. In fact, the requirement of ‘nationality of claims’ does not apply when a State other than the injured State is entitled to invoke responsibility. The first State asserts a collective interest, and this is hardly reconcilable with the application of a requirement derived from nationality. It would be different where the claim is presented by a State as the injured State, if this quality depends on the fact that the injury affects one of its nationals.

Instead, the rule of exhaustion of domestic remedies could apply both to the injured State and to any other State invoking responsibility with the aim of protecting a collective interest. This could occur when responsibility is invoked by virtue of a breach of a human rights obligation, insofar as the invocation comes under the application of the rule.

Further reading

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1 Commentary to art 48, para 8.

2 *Barcelona Traction, Light and Power Company, Limited, Judgment, ICJ Reports 1970*, p 3, 32 (para 33).

3 Ibid, 32 (para 34).

4 As advocated by the Greek delegate before the Sixth Committee, C Economides, 1 November 2001, A/C.6/56/SR.14, para 22.

5 1155 *UNTS* 331. See G Abi-Saab, ‘The Uses of Article 19’ (1999) 10 *EJIL* 339.

6 See especially the interventions before the Sixth Committee of the delegates of Finland, M Koskenniemi, and Israel, Y Dinstein, on 29 and 31 October 2001, A/C.6/56/SR.11, paras 31-33 and SR.13, para 21. This interpretation was criticized, notably by the delegates of the Netherlands, J Lammers, on 31 October 2001 and of Jordan, MD Hmoud, on 1 November 2001, A/C.6/56/SR.12, para 29 and SR.15, paras 22-25.

7 J Crawford, Fourth Report on State Responsibility, 2001, A/CN.4/517, para 40.

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

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10 Separate Opinion of Judge Simma, *Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v Uganda), ICJ Reports 2005*, p 168, 334.

11 *Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v Uganda), ICJ Reports 2005*, p 168, 276 (para 333).

12 Separate Opinion of Judge Simma, *Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v Uganda), ICJ Reports 2005*, p 168, 334.

13 Ibid, 348–349 (para 37).

14 Ibid, 347 (para 35).

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18 Commentary to art 48, para 12.

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20 Separate opinion of Judge Fitzmaurice, *Barcelona Traction, Light and Power Company, Limited, Judgment, ICJ Reports 1970*, p 66; and the joint dissenting opinion of Judges Onyeama, Dillard, Jiménez de Aréchaga, and Sir Humphrey Waldock, *Nuclear Tests (Australia v France), Judgment, ICJ Reports 1974*, p 312, 370.

21 See L-A Sicilianos, Chapter 80.

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Annex 524

J. Friedrich, *International environmental "soft law"* (Springer, 2013), pages 143-171

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Beiträge zum ausländischen öffentlichen Recht und Völkerrecht 247

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International Environmental "soft law"

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The Functions and Limits of Nonbinding Instruments in International Environmental Governance and Law

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Part 2

The functions and limits of nonbinding instruments

A. The international level

One can ascertain the impact of nonbinding instruments on the international level in two ways: their influence on and relationship with formal international environmental law on the one hand, and their role in shaping and linking the activities of international institutions on the other. Both have important implications for the potential of nonbinding instruments to induce changes in the behaviour of their addressees, at least to the extent that one can assume that most states generally tend to follow their international obligations[1] and that state and private actors are today increasingly influenced by international institutions.[2]

I. The interplay of nonbinding instruments with international law

1. The precursory function of nonbinding instruments

The role of nonbinding instruments as precursors to customary or treaty law is widely acknowledged but rarely analysed in detail. This section explores which characteristics of nonbinding instruments facilitate or hamper the emergence of customary law – which may also be of interest for negotiators of such instruments. With respect to treaty law, actors that support the environmental objectives of these instruments often tend to favour a shift to binding rules as soon as politically feasi-

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[1] This is famously expressed by Louis Henkin who observed that "almost all nations observe almost all principles of international law and almost all of their obligations almost all the time," compare L. Henkin, How nations behave: law and foreign policy, 1979, 47.

[2] See e.g. the contributions in J.E. Alvarez, "International Organizations: Then and Now", American Journal of International Law 100 (2006), 324-347; A. von Bogdandy/R. Wolfrum/J. von Bernstorff/P. Dann/M. Goldmann (eds.), The Exercise of Public Authority by International Institutions: Advancing International Institutional Law, 2010.

J. Friedrich, *International Environmental "soft law": The Functions and Limits of Nonbinding Instruments in International Environmental Governance and Law*, Beiträge zum ausländischen öffentlichen Recht und Völkerrecht 247, DOI 10.1007/978-3-642-44946-8_3,
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ble. A closer look at the example of the negotiations of the PIC Convention will show that it may not be that simple, and that a shift from a non-binding instrument to binding law carries distinct advantages and disadvantages.

a) Role in the development of customary international law

It is widely acknowledged that nonbinding instruments may contribute to the emergence of new customary international law.[3] The following analysis will not fully reopen the long-standing debate, but merely confirm this possibility. In addition, a closer look at the process of customary law formation in the context of nonbinding instruments can provide us with a more differentiated view of this issue. As will be seen, the characteristics of a particular instrument – as identified in Part 1 of this study – can be linked to its potential to contribute to the emergence of customary law rules.

(1) Nonbinding instruments and customary law

In traditional international law doctrine, customary law can be described as "usages generally accepted as expressing principles of law".[4] It is considered to emerge as a result of uniform state practice which is

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[3] A.E. Boyle, "Some Reflections on the Relationship of Treaties and Soft Law", International and Comparative Law Quarterly 48 (1999), 901-913 (904); H. Hillgenberg, "A Fresh Look at Soft Law", European Journal of International Law 10 (1999), 499-515 (514); P.-M. Dupuy, "Soft law and the international law of the environment", Michigan Journal of International Law 12 (1990 – 1991), 420-435 (432); H. Neuhold, "The Inadequacy of Law-Making by International Treaties: "Soft Law" as an Alternative" in: V. Röben (ed.), Developments of International Law in Treaty Making, 2005, 39-52 (52); T. Gruchalla-Wesierski, "A Framework for Understanding 'Soft Law'", McGill Law Journal 30 (1984-1985), 37-88 (54); A. Peters/I. Pagotto, "Soft Law as a New Mode of Governance: A Legal Perspective", New Modes of Governance Project 04/D11 (2006), 1 et seq. (23); B. Simma/A. Heinemann, "Codes of Conduct" in: W. Korff et al. (eds.), Handbuch der Wirtschaftsethik, Band 2: Ethik wirtschaftlicher Ordnungen, 1999, 403-418 (415).

[4] Permanent Court of International Justice, The Case of the S.S. "Lotus", Judgement of 7 September 1927, PCIJ Series A – No. 10, at 18.

based on the *opinio juris sive necessitates* – "the belief that this practice is rendered obligatory by the existence of a rule of law requiring it."[5]

The adoption of nonbinding instruments can under certain circumstances reflect an existing or emerging *opinio juris* of states. This has been widely discussed and accepted with respect to resolutions of the United Nations General Assembly (UNGA). UNGA resolutions and the attitude of states towards their adoption are accepted as possibly containing evidence of the existing or emerging *opinio juris* of states,[6] in particular if adopted by consensus.[7] The International Court of Justice hinted at this possibility in the *Nicaragua Case* when explaining that "opinio juris may, though with all due caution, be deduced from, *inter alia*, the attitude of the Parties and the attitude of States towards certain UNGA resolutions".[8] It further confirmed and elaborated on this possibility in its Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons*, stating that resolutions of the UNGA "can, in certain circumstances, provide evidence important for establishing the existence of a rule or the emergence of an opinio juris".[9] In the recent judgment

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5 International Court of Justice (ICJ), North Sea Continental Shelf Cases (Federal Republic of Germany/Denmark; Federal Republic of Germany/ Netherlands), Judgement of 20 February 1969, ICJ Reports 1969, p. 3, para. 77; on the formation of customary law in the context of environmental law see P.-M. Dupuy, "Formation of customary international law and general principles" in: J. Brunnée/D. Bodansky/E. Hey (eds.), Oxford Handbook of International Environmental Law, 2007, 449-466; generally on customary law formation G. Dahm/J. Delbrück/R. Wolfrum, Völkerrecht, Band I/1, Die Grundlagen. Die Völkerrechtssubjekte, 1989, 56 et seq.

6 A.A. D'Amato, The concept of custom in international law, 1971, 86; A. Verdross, Die Quellen des universellen Völkerrechts, 1973, 116; G.J.H. van Hoof, Rethinking the sources of international law, 1983, 182; J.A. Frowein, "Der Beitrag der internationalen Organisationen zur Entwicklung des Völkerrechts", Zeitschrift für ausländisches öffentliches Recht und Völkerrecht 36 (1976), 147-167 (150); A. Verdross/B. Simma, Universelles Völkerrecht: Theorie und Praxis, 1984, 359.

7 Generally on this discussion T. Treves, "Customary International Law", in: R. Wolfrum (ed.), Max Planck Encyclopedia of Public International Law, 2010, para. 44, online at: www.mpepil.com.

8 ICJ, Military and Paramilitary Activities in und against Nicaragua (Nicaragua v. United States of America), Judgment of 27 June 1986, ICJ Reports 1986, p. 14, para. 188.

9 ICJ, Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion of 8 July 1996 , I.C.J Reports (1996), p. 226, para. 70.

on the *Case Concerning Armed Activities in the Territory of the Congo (Democratic Republic of the Congo v. Uganda),* the ICJ as in other cases relied on UNGA resolutions to support its finding that a certain rule was part of customary international law, and looked to the resolutions to assess whether the customary law rule applied to the case at hand.[10]

Even though UNGA resolutions can be particularly influential due to the particularly authoritative nature of the General Assembly,[11] the underlying argument has much wider application. When certain conditions relating to the authority of the adopting body and the conditions of adoption are met, any nonbinding instrument adopted in multilateral fora by state representatives which outlines a sufficiently concrete norm may also contribute to the formation of customary law rules.[12] Due to

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[10] ICJ, Case Concerning Armed Activities in the Territory of the Congo (Democratic Republic of the Congo v. Uganda), Judgment of 19 December 2005, ICJ Reports 2005, p. 27, para. 244; compare also Iran-United States Claims Tribunal which in the case Sedco Inc. v. Nat'l Iranian Oil Co., 25 ILM 629 (1986), at para. 33 stated that "United Nations General Assembly resolutions are not as such binding upon States and generally are not evidence of customary law. Nevertheless, it is generally accepted that such resolutions in certain specified circumstances may be regarded as evidence of customary international law and can contribute – among other factors – to the creation of such law".

[11] For instance, a customary law rule has arguably arisen from the call for a global moratorium on large-scale pelagic driftnet fishing in the high seas by the United Nations General Assembly, UN Doc. A/RES/46/215 (1991), para. 3, which was adopted by consensus and received support from a very large number of states. Compare for this argument also P. Sands, Principles of International Environmental Law, 2003, 589.

[12] P.-M. Dupuy, "Formation of customary international law and general principles" in: J. Brunnée/D. Bodansky/E. Hey (eds.), Oxford Handbook of International Environmental Law, 2007, 449-466 (459); in this sense already R. Higgins, "The Role of Resolutions of International Organizations in the Process of Creating Norms in the International System" in: W.E. Butler (ed.), International Law and the International System, 1987, 21-30 (28); O. Schachter, "International Law in Theory and Practice: General Course in Public International Law", Recueil des cours de l'Académie de Droit International de La Haye 178 (1982), 9-396 (129); T. Gruchalla-Wesierski, "A Framework for Understanding 'Soft Law'", McGill Law Journal 30 (1984-1985), 37-88 (54). This possibility is also accepted by most authors dealing with codes of conduct and nonbinding instruments other than General Assembly Resolutions, compare B. Simma/A. Heinemann, "Codes of Conduct" in: W. Korff et al. (eds.), Hand-

the authority of large-scale UN conferences, the legally nonbinding 1972 Stockholm Declaration and the 1992 Rio Declaration have arguably contributed to the emergence or at least the development of customary international environmental law,[13] even though the influence of these principles on international environmental law can hardly be assessed in terms of binding customary law status but goes much further.[14] Furthermore, nonbinding recommendations such as the OECD Principles Concerning Transfrontier Pollution adopted in 1974[15], the

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buch der Wirtschaftsethik, Band 2: Ethik wirtschaftlicher Ordnungen, 1999, 403-418 (415); H. Hohmann, Präventive Rechtspflichten und -prinzipien des modernen Umweltvölkerrechts, 1992, 232; P. Muchlinski, "Human Rights, social responsibility and the regulation of international business: The development of international standards by intergovernmental organisations", Non-State Actors and International Law 3 (2003), 123-152 (128); H.W. Baade, "The Legal Effects of Codes of Conduct for Multinational Enterprises", German Yearbook of International Law 22 (1979), 11-52 (23); I. Brownlie, "Legal effects of codes of conduct for MNEs: Commentary" in: N. Horn (ed.), Legal Problems of Codes of Conduct for Multinational Enterprises, 1980, 39-43 (42); U. Dieckert, Die Bedeutung unverbindlicher Entschließungen internationaler Organisationen für das innerstaatliche Recht der Bundesrepublik Deutschland, 1993, 250; J.E. Alvarez, International Organizations as Law-makers, 2005, 146-147.

13 Principle 21 of the Stockholm Declaration, outlining that the sovereign rights of states to exploit their resources must be balanced with the general obligation of states to avoid transboundary harm, can be considered customary law today, compare e.g. ICJ, Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion of 8 July 1996, I.C.J Reports (1996), p. 226, para. 29; A.C. Kiss/D. Shelton, International environmental law, 2004, 190. The legal status of other principles such as the precautionary principle, the principle of common but differentiated responsibilities or the principle of cooperation is still disputed, compare for an overview of the debate J. Brunnée, "The Stockholm Declaration and the Structure and Processes of International Environmental Law" in: A. Chircop (ed.), The future of ocean regime building: essays in tribute to Douglas M. Johnston, 2009, 41-62; U. Beyerlin, "Different Types of Norms in International Environmental Law: Policies, Principles and Rules" in: J. Brunnée (ed.), Oxford Handbook of International Environmental Law, 2007, 425-448.

14 On this J. Brunnée, "The Stockholm Declaration and the Structure and Processes of International Environmental Law" in: A. Chircop (ed.), The future of ocean regime building: essays in tribute to Douglas M. Johnston, 2009, 41-62.

15 OECD Principles Concerning Transfrontier Pollution, OECD C(88)84(Final) (1974), Principle 9.

1987 UNEP Principles on Shared Resources[16] together with important treaty law provisions[17] played an important role in the recognition of the customary legal duty to notify and inform other affected states in emergency situations that endanger shared natural resources.[18]

This role of nonbinding instruments should however be approached with caution. One should not be too quick to infer *opinio juris* simply from the act of adoption of a clearly nonbinding instrument.[19] Most of these instruments are adopted by states with the knowledge that they are nonbinding.[20] States are aware which language indicates nonbinding status, and whether the respective international body has the competence to enact and interpret binding law or not. Most notably, general provisions in nonbinding instruments or in their adopting decisions which emphasise their overall voluntary or nonbinding character[21] make it difficult to qualify the act of adoption and subsequent supportive statements of states as an expression of *opinio juris.*[22] In fact, these provisions clearly communicate quite the opposite, namely that the addressees must not consider themselves obliged in any legally binding

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16 UNEP Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, 17 ILM 1097 (1978), Principle 9.

17 Most notably Article 198 of the United Nations Convention on the Law of the Sea (UNCLOS), 1833 UNTS 3, 21 ILM 1261 (1982).

18 A.C. Kiss/D. Shelton, International environmental law, 2004, 191-194.

19 G. Dahm/J. Delbrück/R. Wolfrum, Völkerrecht, Band I/1, Die Grundlagen. Die Völkerrechtssubjekte, 1989, 72; I. MacGibbon, "Means for the Identification of International Law: General Assembly Resolutions: Custom, Practice and Mistaken Identity" in: B. Cheng (ed.), International law: teaching and practice, 1982, 10-26 (23); K. Döhring, Völkerrecht, 2003, § 4, mn 308; P. Malanczuk, Akehurst's modern introduction to international law, 1997, 53.

20 This is stressed by K. Döhring, Völkerrecht, 2003, § 4, mn 308; S.M. Schwebel, The legal effect of resolutions and codes of conduct of the United Nations, 1986, 11.

21 Compare e.g. OECD Guidelines, Chapter I, para. 1; FAO Code of Conduct on the Distribution and Use of Pesticides, Article 1.1; FAO Code of Conduct for Responsible Fisheries, Article 1.1.

22 B.-O. Bryde, Internationale Verhaltensregeln für Private – Völkerrechtliche und verfassungsrechtliche Aspekte, 1981, 24; R.E. Lutz/G.D. Aron, "Codes of Conduct and Other International Instruments" in: G. Handl/R.E. Lutz (eds.), Transferring Hazardous Technologies and Substances: The International Legal Challenge, 1989, 129-151 (155).

way. Any positive response to such an instrument cannot simply be interpreted to negate this clear statement of non-bindingness. As long as the voluntary character of the respective instrument remains the undisputed common denominator, the formation of a customary law rule cannot be logically inferred. However, this remark of caution does not deny the possibility that even these nonbinding instruments may shape practice which eventually is accompanied by an emerging *opinio juris* of states. *Opinio juris* must not necessarily be present at the time of adoption of a certain instrument or a policy, but may emerge with continuous repetition and practice in accordance with a certain norm over time.[23] But the simple reference to these instruments that stress the voluntary nature of their norms does not suffice.

Further, caution is also warranted with respect to the existence of the element of state practice. *Opinio juris* alone does not suffice. As stated by the ICJ in the Nicaragua case in the context of UNGA resolutions and customary law rules, "[the] mere fact that States declare their recognition of certain rules is not sufficient... to consider these as being customary international law, and as applicable as such to those States. ... The Court must satisfy itself that the existence of the rule in the *opinio juris* of States is confirmed by state practice."[24] This is not the place to revisit the argument that opinio juris may be the sole decisive element for the formation of customary international law.[25] The element of state practice secures that the established concept of customary law does not become a mere tool for wishful policy arguments without any basis in the real world, and thus safeguards the normative force of the concept of customary law.

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[23] Compare already A. Verdross, "Entstehungsweisen und Geltungsgrund des universellen völkerrechtlichen Gewohnheitsrechts", Zeitschrift für ausländisches öffentliches Recht und Völkerrecht 29 (1969), 635-653 (639 et seq.); for the possibility that codes of conduct may culminate in hard rules in spite of disclaimers regarding their legal nature B.-O. Bryde, Internationale Verhaltensregeln für Private – Völkerrechtliche und verfassungsrechtliche Aspekte, 1981, 25.

[24] ICJ, Military and Paramilitary Activities in und against Nicaragua (Nicaragua v. United States of America), Judgment of 27 June 1986, ICJ Reports 1986, p. 14, para. 184.

[25] See for such as view e.g. B. Cheng, "Custom: The Future of General State Practice in a Divided World" in: R.J. Macdonald (ed.), The Structure and Process of International Law: Essays in Legal Philosophy Doctrine and Theory, 1983, 513-554 (533).

A different question is what should count as state practice. In times of increasing cooperation through international organisations and multilateral fora, one means for identifying state practice may be to look not only at the sum of individual acts of states, but also at collective statements of states in these fora.[26] The collective acts and actions of states are *inter alia* evidenced in acts of bodies of international organisations such as resolutions and declarations.[27] However, while the responses of states to international norms can be considered as relevant indicators, simple voting for an international instrument and its adoption should not be considered sufficient to actually ascertain a customary law rule. Confirming the existence of state practice requires further evidence. As clarified by Rosalyn Higgins, who was one of the first to point out the role of nonbinding resolutions for customary law development, "resolutions cannot be a substitute for ascertaining custom".[28] Further practice of states must be examined in order to ensure that what states say in international fora coincides with what they actually do.[29] In other words, voting and debating cannot be equated with actual change in behaviour, and thus they alone cannot fulfil the requirement of state practice.[30] In particular if one accepts that acts of states in international organisations such as voting on nonbinding instruments may possibly reflect an emerging *opinio juris*, care must be taken to uphold the requirement of state practice in order not to erode the concept of custom-

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[26] The significance of collective acts was first pointed out by R. Higgins, The development of international law through the political organs of the United Nations, 1963, 2 and 117; Dissenting Opinion of Judge Tanaka to ICJ, South West Africa (Libera v. South Africa), Judgment of 18 July 1966, ICJ Reports 1966, p. 248, at p. 290; J.E. Alvarez, International Organizations as Lawmakers, 2005, 146-148.

[27] R. Higgins, The development of international law through the political organs of the United Nations, 1963, 2.

[28] R. Higgins, "The Role of Resolutions of International Organizations in the Process of Creating Norms in the International System" in: W.E. Butler (ed.), International Law and the International System, 1987, 21-30 (27).

[29] P.-M. Dupuy, "Formation of customary international law and general principles" in: J. Brunnée/D. Bodansky/E. Hey (eds.), Oxford Handbook of International Environmental Law, 2007, 449-466 (459); A. Verdross/B. Simma, Universelles Völkerrecht: Theorie und Praxis, 1984, 637.

[30] A.A. D'Amato, The concept of custom in international law, 1971, 88; I. MacGibbon, "Means for the Identification of International Law: General Assembly Resolutions: Custom, Practice and Mistaken Identity" in: B. Cheng (ed.), International law: teaching and practice, 1982, 10-26 (20).

ary law and thus authority of international law.[31] Otherwise one would also "count the articulation of a rule twice",[32] namely both as opinio juris and state practice.

With these reservations in mind, it can be concluded that nonbinding instruments may play an important role in customary law formation, in particular in times of increased activities of international institutions. As aptly described by Jonathan Charney, multilateral fora of international institutions adopting formally nonbinding instruments contributes to a more formalised process of customary law formation.[33] Representatives of states and other actors come together, debate problems of common concern and express their shared understandings with the adoption of proposals, resolutions or codes of conduct, frequently in nonbinding form. The products of these discussions are communicated to all states and organisations which may positively respond to the proposals and recommendations either by implementing a particular norm or by other forms of support. A rule or principle which receives a positive response can eventually enter the realm of international law irrespective of the technical legal status of the original instrument.[34] This does not mean that these institutions thereby take on legislative functions. State practice and *opinio juris* remain necessary elements which must be clearly discernable. But through the adoption of these instruments, international institutions formalise and make more transparent the processes that may eventually result in the emergence of a new customary law rule.[35] The actual codification of norms in this way facili-

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31 B. Simma/P. Alston, "The Sources of Human Rights Law: Custom, Jus Cogens, and General Principles", Australian Yearbook of International Law 12 (1992), 82-108 (96-100); with respect to GA resolutions in this sense already C. Tomuschat, "Die Charta der wirtschaftlichen Rechte und Pflichten der Staaten: Zur Gestaltungskraft von Deklarationen der UN-Generalversammlung", Zeitschrift für ausländisches öffentliches Recht und Völkerrecht 36 (1976), 444-491 (468).

32 B. Simma/P. Alston, "The Sources of Human Rights Law: Custom, Jus Cogens, and General Principles", Australian Yearbook of International Law 12 (1992), 82-108 (96).

33 J.I. Charney, "Universal International Law", American Journal of International Law 87 (1993), 529-551 (543 et seq.)

34 J.I. Charney, "Universal International Law", American Journal of International Law 87 (1993), 529-551 (545).

35 J.I. Charney, "Universal International Law", American Journal of International Law 87 (1993), 529-551 (547).

tates the identification of relevant practice by providing a point of comparison that is needed to identify those types of conduct which support a particular rule from those that are irrelevant.[36] Cross-references to norms in (binding and nonbinding) instruments of other organisations[37] further enhance the formation of a common understanding that contributes to this process.[38]

(2) Distinguishing between nonbinding instruments

It is necessary further to distinguish among nonbinding instruments according to their characteristics along the lines of the parameters identified in Part 1 above.[39] As stated by the ICJ in its Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons*, the relevant circumstances on which the role of a UNGA resolution depends are "its content and the conditions of its adoption".[40] One must thus for instance distinguish those instruments expressing an opinion on international law from the more common ones that express the will of states to introduce new norms and possibly change the status quo.[41] The potential of an instrument will depend on its authority, which in turn depends on whether it is promulgated by a widely accepted and legitimated forum and whether it is widely supported by states.[42] An instrument adopted by consensus by the United Nations General Assembly, as for example the moratorium on large-scale pelagic drift net fishing in

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36 U. Fastenrath, "Relative Normativity in International Law", European Journal of International Law 4 (1993), 305-340 (319); T. Gruchalla-Wesierski, "A Framework for Understanding 'Soft Law'", McGill Law Journal 30 (1984-1985), 37-88 (60-61).

37 Consider for details the discussion at A.II, further below in this Part.

38 P.-M. Dupuy, "Soft law and the international law of the environment", Michigan Journal of International Law 12 (1990 – 1991), 420-435 (424-428).

39 See Part 1, at C, further above.

40 ICJ, Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion of 8 July 1996, ICJ Reports 1996, p. 226, para. 70.

41 Similarly T. Treves, "Customary International Law", in: R. Wolfrum (ed.), Max Planck Encyclopedia of Public International Law, 2010, para. 44, online at: www.mpepil.com.

42 U. Fastenrath, "Relative Normativity in International Law", European Journal of International Law 4 (1993), 305-340 (319).

the high seas[43] or the FAO CCRF of the Conference of the FAO, certainly indicate greater authority than resolutions adopted by majorities, and those nonbinding instruments adopted by lower level bodies as for instance the numerous International Plans of Action and Guidelines adopted by the Committee on Fisheries of the FAO. It also depends on the extent to which this forum communicates that the norm under consideration is considered to be part of international law development.[44] Furthermore, as mentioned above, nonbinding instruments that expressly stress their nonbinding nature should be distinguished from those that do not, and in particular from those purporting to codify international law. And finally, for conforming practice to ensue, institutionalisation of discourse over compliance with a particular instrument can make a difference.[45]

Another characteristic identified in Part 1 that matters in this regard is whether norms is to whom a particular instruments and its norms are addressed. When particular norms of a nonbinding instrument are addressed to non-state actors such as multinational corporations, customary law formation is rendered particularly difficult. While it is theoretically possible for such norms eventually to become customary law that directly binds multinational corporations, such a progressive step in legal doctrine is more likely to be part of future treaty law developments.[46] As long as international law doctrine does not accept international legal obligations for multinational corporations, these norms cannot materialise into customary law obligations even if widely supported and complied with by these actors.[47] And even if one accepted a

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[43] UN Doc. A/RES/46/215 (1991), para. 3.

[44] J.I. Charney, "Universal International Law", American Journal of International Law 87 (1993), 529-551 (544).

[45] See for this feature of nonbinding instruments and its potential the analysis in this Part 2, at B.I.4.and 5. The importance of follow-up mechanisms for customary law formation was already stressed early in the "soft law" debate by H.W. Baade, "The Legal Effects of Codes of Conduct for Multinational Enterprises", German Yearbook of International Law 22 (1979), 11-52 (21 and 23); B.-O. Bryde, Internationale Verhaltensregeln für Private – Völkerrechtliche und verfassungsrechtliche Aspekte, 1981, 24.

[46] J.A. Zerk, Multinationals and Corporate Social Responsibility: Limitations and Opportunities in International Law, 2008, 305.

[47] In this sense also C. Chinkin, "Normative Development in the International Legal System" in: D. Shelton (ed.), Commitment and Compliance: the Role of Non-binding Norms in the International Legal System, 2000, 21-42 (30); H.W. Baade, "The Legal Effects of Codes of Conduct for Multinational

limited international legal status of multinational corporations with the effect that they can be directly obliged by international law, such a status would not necessarily extend to the ability of these actors to create customary international law.

Norms of nonbinding instruments addressed to non-state actors could however indirectly influence the content of customary law, namely insofar as they may clarify how states must treat non-state actors.[48] A distinction must therefore be drawn between the emergence of customary law rules obliging private actors and the contribution of nonbinding instruments addressed to private actors to customary law obligations of states. Although for the most part directed at multinational corporations, the OECD Guidelines for instance also entail commitments for governments relating to the treatment of multinational corporations. In particular, they should encourage corporations to comply with the norms in the Guidelines.[49] This could give rise to the customary law rule that states must ensure a certain minimum environmental and social accountability of multinational corporations. The content of these minimum requirements would then be defined by those norms of the OECD Guidelines outlining the responsibilities of multinational corporations. Several of the principles of corporate environmental responsibility such as the precautionary principle, the requirement to conduct an environmental impact assessment and the notification requirements in the case of environmental damage expressed in the OECD Guidelines or in the Draft UN Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights could thus eventually become part of international cus-

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Enterprises", German Yearbook of International Law 22 (1979), 11-52 (9); R.E. Lutz/G.D. Aron, "Codes of Conduct and Other International Instruments" in: G. Handl/R.E. Lutz (eds.), Transferring Hazardous Technologies and Substances: The International Legal Challenge, 1989, 129-151 (155); I. Seidl-Hohenveldern, "International Economic 'Soft Law'", Recueil des Cours de l'Académie de Droit International 163 (1979), 169-246 (212).

[48] B.-O. Bryde, Internationale Verhaltensregeln für Private – Völkerrechtliche und verfassungsrechtliche Aspekte, 1981, 24.

[49] Take for example the provision in the OECD Guidelines, Chapter I, para. 2, which stipulates that "governments adhering to the Guidelines encourage the enterprises ... to observe the Guidelines wherever they operate", and the substantive requirement in the OECD Guidelines, Chapter I, para. 8, to treat enterprises equitably.

tomary law obliging states.[50] So far, however, there is still insufficient state practice to confirm the existence of such rules, also because the number of developing states that participate in the process of the OECD Guidelines is still very limited, and nothing indicates that OECD Members feel legally obliged to act.[51]

Although nonbinding instruments may contribute to the development of customary law, this discussion indicates that much depends on the particular characteristics of a specific instrument. Given the above mentioned limitations, the contribution of many of these instruments to customary law development does not appear as their principal function, and hardly captures their specific potential.

b) Role in the development of general principles

Nonbinding international instruments can also contribute to the emergence of 'general principles recognised by civilized nations' referenced as a source of international law in Article 38 (1) (c) of the Statute of the International Court of Justice (ICJ). Their influence in this regard can be perceived in two ways, depending on how one approaches the concept of 'general principles'.

According to the traditional understanding which is based upon the drafting history of the ICJ Statute, 'general principles' are those recognised in the domestic legal orders of states.[52] If general principles are understood in this sense, the impact of international nonbinding instruments on such principles will consequently depend on the extent to which principles adopted in such instruments are implemented in domestic legal systems. This rather indirect influence depends on the availability of compliance mechanisms that enhance the implementation and adoption of the relevant norms in the various domestic legal systems.

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[50] J.A. Zerk, Multinationals and Corporate Social Responsibility: Limitations and Opportunities in International Law, 2008, 276 et seq.

[51] J.A. Zerk, Multinationals and Corporate Social Responsibility: Limitations and Opportunities in International Law, 2008, 300 and 304.

[52] G.J.H. van Hoof, Rethinking the sources of international law, 1983, 136-139; see also the references in B. Vitanyi, "Les positions doctrinales concernant le sens de la notion de 'principes généraux de droit reconnus par les nations civilisée'", Revue générale de droit international public 86 (1982), 48 (96-102).

But it can also be argued that it is possible to identify 'general principles' directly at the international level.[53] The emergence of representative international fora articulating international principles, as for example through UNGA resolutions, and the broad acceptance of such principles by states also constitutes an appropriate mechanism for the objective validation of general principles. Given the possibility to objectively identify the validation of a rule through the consensus of states at the international level, there is no further need to restrict the concept of 'general principles' to those accepted at the domestic level.[54] International nonbinding instruments such as resolutions adopted by UN organs can – alongside judicial decisions and treaty law – play a significant role in the making and identification of general principles.[55]

However, as for customary law, one must remain careful not to give up any objective element in ascertaining general principles. A complete lack of practice and thus of objective element would rid international law of one its fundamental pillars.[56] Thus, the doctrinal proposal of some authors to rely exclusively on *opinio juris* for the ascertainment of general principles – as opposed to concrete rules – goes too far.[57] As international law in the form of principles that shape rules could thus evolve in the absence of any state practice, this conception would erode

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53 Compare for this conception C.M. Bassiouni, "A Functional Approach to 'General Principles of International Law'", Michigan journal of international law 11 (1990), 768-818 (772); B. Simma/P. Alston, "The Sources of Human Rights Law: Custom, Jus Cogens, and General Principles", Australian Yearbook of International Law 12 (1992), 82-108 (102); W. Weiß, "Allgemeine Rechtsgrundsätze des Völkerrechts", Archiv des Völkerrechts 39 (2001), 394-431 (409); S. Kadelbach/T. Kleinlein, "Überstaatliches Verfassungsrecht. Zur Konstitutionalisierung im Völkerrecht", Archiv des Völkerrechts 44 (2006), 235-266 (255); N. Petersen, Demokratie als teleologisches Prinzip: Zur Legitimität von Staatsgewalt im Völkerrecht, 2009, 67 et seq.

54 *Ibid.*

55 Similarly W. Weiß, "Allgemeine Rechtsgrundsätze des Völkerrechts", Archiv des Völkerrechts 39 (2001), 394-431 (410); B. Simma/P. Alston, "The Sources of Human Rights Law: Custom, Jus Cogens, and General Principles", Australian Yearbook of International Law 12 (1992), 82-108 (102).

56 G. Dahm/J. Delbrück/R. Wolfrum, Völkerrecht, Band I/1, Die Grundlagen. Die Völkerrechtssubjekte, 1989, 66.

57 This is proposed by S. Kadelbach/T. Kleinlein, "Überstaatliches Verfassungsrecht. Zur Konstitutionalisierung im Völkerrecht", Archiv des Völkerrechts 44 (2006), 235-266 (261); N. Petersen, Demokratie als teleologisches Prinzip: Zur Legitimität von Staatsgewalt im Völkerrecht, 2009, 72.

the objective element of practice that has been a fundamental doctrinal basis of international law which prevents that international law becomes too easily subject to influences of ideology. Even if state practice is not necessary to the same extent as in customary law processes, some form of objective recognition in legal practice is necessary to fulfil the requirements expressed in Article 38 (1) (c) ICJ Statute. General principles could for instance not be ascertained in the face of widespread opposing practice by states.[58] Provided that some form of objective acceptance by states is ascertainable, nonbinding instruments can play a role in identifying general principles at the international level.

c) Role in the development of treaty law

The adoption of nonbinding instruments is often a first step in the development of treaty law.[59] A nonbinding instrument such as a resolution of an international organisation or treaty body frequently stands at the beginning of this process. Although nonbinding, resolutions or declarations shape and restrain future negotiations on the issue by defining politically the principles, objectives and negotiations.[60]

Nonbinding instruments are often adopted as a first step in treaty law development for a number of reasons. First of all, nonbinding instruments often allow states to go beyond the status quo and adopt com-

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58 G. Dahm/J. Delbrück/R. Wolfrum, Völkerrecht, Band I/1, Die Grundlagen. Die Völkerrechtssubjekte, 1989, 66.

59 A.E. Boyle, "Some Reflections on the Relationship of Treaties and Soft Law", International and Comparative Law Quarterly 48 (1999), 901-913 (904-905); P. Muchlinski, "Human Rights, social responsibility and the regulation of international business: The development of international standards by intergovernmental organisations", Non-State Actors and International Law 3 (2003), 123-152 (128); A. Peters/I. Pagotto, "Soft Law as a New Mode of Governance: A Legal Perspective", New Modes of Governance Project 04/D11 (2006), (23); B. Simma, "Remarks" in: G.F. Handl, "A Hard Look at Soft Law", American Society of International Law Proceedings 82 (1988), 371-393 (379) (pointing out that in the process of development of hard human rights law, a soft law stage is rather the rule than the exception).

60 R. Wolfrum, "Vorbereitende Willensbildung und Entscheidungsprozeß beim Abschluß multilateraler völkerrechtlicher Verträge" in: J. Ipsen/E. Schmidt-Jortzig (eds.), Recht-Staat-Gemeinwohl: Festschrift für Dietrich Rauschning, 2001, 407-418 (412).

paratively progressive norms.[61] It is often easier to reach political consensus when the norms are nonbinding.[62] Negotiation periods are shorter, and governments need not be concerned with domestic legal and political obstacles. Without ratification requirements, the instrument can be adopted and applied immediately. Governments can also postpone questions regarding their capacity to comply, and need not fear legal consequences in the meantime.

Second and perhaps most important is their usefulness to initiate a broad discourse among all relevant actors. Nonbinding instruments more easily allow the integration of non-state actors and reluctant states into a continuous discourse on the creation and implementation of substantive norms at a point in time when the issue is still contested.[63] Although not legally binding, these instruments generally frame the expectations of the actors in the international legal discourse by legitimising certain behaviour and delegitimising alternative norms and points of view. More specifically, they set the agenda for issues dealt with at the international level and pre-define possible approaches and principles and future legal rules.[64] By generating and defining political and legal discourse, nonbinding instruments thus serve as catalysts of lawmaking processes which pave the way for the adoption of international treaties.

Finally, as will be seen in further detail below, nonbinding instruments also influence and shape behaviour in the desired way. When states begin acting in accordance with a particular instrument or once they realise that a proposed system is feasible, moving towards hard law usually requires only little additional political efforts. The networks of government officials that frequently emerge around nonbinding instru-

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61 E. Louka, International Environmental Law: Fairness, Effectiveness and World Order, 2006, 60.

62 A.C. Kiss/D. Shelton, International environmental law, 2004, 89; J.B. Skjaerseth/O.S. Stokke/J. Wettestad, "Soft Law, Hard Law, and Effective Implementation of International Environmental Norms", Global Environmental Politics 6 (2006), 104-120 (115).

63 A.C. Kiss/D. Shelton, International environmental law, 2004, 89.

64 R. Wolfrum, "Vorbereitende Willensbildung und Entscheidungsprozeß beim Abschluß multilateraler völkerrechtlicher Verträge" in: J. Ipsen/E. Schmidt-Jortzig (eds.), Recht-Staat-Gemeinwohl: Festschrift für Dietrich Rauschning, 2001, 407-418 (412); R.E. Lutz/G.D. Aron, "Codes of Conduct and Other International Instruments" in: G. Handl/R.E. Lutz (eds.), Transferring Hazardous Technologies and Substances: The International Legal Challenge, 1989, 129-151 (157).

ments and the institutionalised discourse that is associated with these networks facilitate such a process: cooperation under the nonbinding instrument will already have created common understandings and policies on the respective issue.[65]

In similarity to processes of customary law formation, these considerations suggest that the precursory function is enhanced through the institutionalisation of discourse within multilateral fora and committees as well as follow-up procedures that help to shape behaviour and initiate learning processes by the participating actors.

(1) Examples from practice

Practice overwhelmingly confirms the relevance of nonbinding norms for treaty development.[66] Prominent examples include the United Nations Declaration on Outer Space[67] which was the forerunner to the Treaty on Outer Space;[68] and the United Nations Resolution on the Seabed as the Common Heritage of Mankind,[69] a code of conduct which preceded in particular Part XI of the United Nations Conven-

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[65] K. Raustiala, "The Architecture of International Cooperation: Transgovernmental Networks and the Future of International Law", Virginia Journal of International Law 43 (2002-2003), 1-92 (85-86).

[66] For this assessment, compare e.g. E. Brown Weiss, "Introduction" in: E. Brown Weiss (ed.), International Compliance with Nonbinding Accords, 1997, 1-20 (5).

[67] Declaration of Legal Principles Governing Activities of States in Exploration and Use of Outer Space (13 December 1963), UN Doc. A/RES/5515 (1963).

[68] Treaty on Principles Governing Activities of States in Exploration and Use of Outer Space, Including the Moon and other Celestial Bodies (27 January 1967), UNGA Res. 2222(XXI), 610 UNTS 205.

[69] Declaration of Principles Governing Sea-Bed and Ocean Floor, and Subsoil Thereof, Beyond Limits of National Jurisdiction, UN G.A. Res. 2749 (XXV) of 17 December 1970, U.N. Doc. A/8028 (1971), 10 ILM 220 (1971), at 24.

tion on the Law of the Sea[70] by defining that the seabed, the sub-soil and their resources belong to the common heritage of mankind.[71]

International environmental law appears as an area of law where this role of nonbinding instruments is particularly significant. The impact of nonbinding declarations such as the Stockholm Declaration on the Human Environment of 1972 on the principles and processes of international environmental law as well as treaty law can hardly be overestimated.[72] International organisations such as the Food and Agriculture Organization (FAO) or the International Maritime Organization (IMO) successfully adopt international nonbinding instruments and then strive to develop a binding treaty on that basis. Thus, the International Treaty on Plant Genetic Resources for Food and Agriculture, which entered into force in 2004 and has 120 state parties as of April 2009,[73] emerged from the FAO International Undertaking on Plant Genetic Resources adopted by the FAO in 1983.[74] A similar process occurred in the development of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention)[75] which is based on the UNEP Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes.[76] Also, the concept of environmental impact assessment in a

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70 United Nations Convention on the Law of the Sea (10 December 1982), 1833 UNTS 3; 21 ILM 1261 (1982), 21 ILM 1261 (1982).

71 On these developments R. Wolfrum, Die Internationalisierung staatsfreier Räume: die Entwicklung einer internationalen Verwaltung für Antarktis, Weltraum, Hohe See und Meeresboden, 1984, 331 et seq.

72 Instead of many J. Brunnée, "The Stockholm Declaration and the Structure and Processes of International Environmental Law " in: A. Chircop (ed.), The future of ocean regime building: essays in tribute to Douglas M. Johnston, 2009, 41-62; specifically for the impact on marine law see the contributions in M.H. Nordquist (ed.), The Stockholm declaration and law of the marine environment, 2003.

73 International Treaty on Plant Genetic Resources for Food and Agriculture. The treaty is deposited at the FAO and available at http://www.fao.org/legal/treaties/033t-e.htm.

74 International Undertaking on Plant Genetic Resources, adopted by FAO Conference Res. 8/83 (1983).

75 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1673 UNTS 126, 28 ILM 657 (1989).

76 Cairo Guidelines and Principles for the Environmental Sound Management of Hazardous Waste, UN Doc. UNEP WG 122/3 (1985).

transboundary context which was developed from the UNEP Guidelines on Environmental Impact Assessment and other nonbinding instruments in 1987[77] became the basis for the development of the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) which was adopted in 1991 and entered into force in 1997.[78]

Nonbinding instruments of corporate responsibility such as the OECD Guidelines for Multinational Enterprises which reflect an emerging consensus on principles and standards for multinational corporations are increasingly seen as useful models for future treaty law norms on this issue.[79] The FAO Code of Conduct for Responsible Fisheries (CCRF), analysed in Part 1,[80] also appears to influence treaty making. For example, the riparian states of Lake Tanganyika agreed to develop sustainable fisheries management policies based on the objectives of the CCRF in the Convention on the Sustainable Management of Lake Tanganyika.[81]

A similar development can be observed with respect to the FAO International Plan of Action against Illegal, Unreported and Unregulated (IUU) Fishing. Enforcement through control measures by port states is one of the central means of combating illegal and unreported fishing. Already in 2005, the FAO Committee on Fisheries had acknowledged "that there was a need to strengthen port State measures ... given that the lack of agreed, binding measures provided a loophole". Accord-

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77 UNEP Goals and Principles of Environmental Impact , UNEP/GC14/25 (1987).

78 UNECE Convention on Environmental Impact Assessment in a Transboundary Context, 30 ILM 800 (1991).

79 United Nations General Assembly, Human Rights Council, Report of the Special Representative of the Secretary-General (SRSG) on the issue of human rights and transnational corporations and other business enterprises, "Business and Human Rights: Mapping International Standards of Responsibility and Accountability for Corporate Acts", U.N. Doc. A/HRC/4/035 of 9 February 2007, para. 49; J.A. Zerk, Multinationals and Corporate Social Responsibility: Limitations and Opportunities in International Law, 2008, 298 and 305; more hesitant K. Weilert, "Transnationale Unternehmen im rechtsfreien Raum? Geltung und Reichweite völkerrechtlicher Standards", Zeitschrift für ausländisches öffentliches Recht und Völkerrecht 69 (2009), 883-917 (908).

80 Compare the case study in Part 1, at B.I, further above.

81 Article 7 para.2 b) of Convention on the Sustainable Management of Lake Tanganyika of 12 June 2003, available at http://faolex.fao.org/faolex/index.htm.

ingly, in order to establish binding minimum standards for port state measures, the 131 states represented at the Committee on Fisheries of the FAO in 2007 started the process of developing a new legally binding international agreement to be developed on the basis of the International Plan of Action on Illegal, Unreported and Unregulated Fishing which was developed under the framework of the FAO Code of Conduct for Responsible Fisheries as well as the FAO Model Scheme on Port State Measures to Combat IUU Fishing.[82] In 2009, the FAO Conference adopted the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing which *inter alia* establishes detailed rules on the possibility of inspections of vessels, the denial of port entry or denial of landing facilities in cases of IUU fishing.[83] The shift to a binding agreement indicates that states seem to find some additional value in the development of a legally binding treaty when they need to avoid loopholes. In other words, binding instruments seem to be considered necessary in order that state actors can be reassured that all port states will indeed apply the measures. This can be taken as a sign for one central limitation of nonbinding instruments, namely that they are not able to provide for legal certainty and reliability.

One of the most striking examples of the relevance of a nonbinding precursor for a treaty is the development of the PIC Convention.[84] The next section will take a closer look at this development in order to provide a better picture of the significance of nonbinding instruments for international law-making.

(2) Case study: from the voluntary PIC procedure to the PIC Convention

(i) The shift to binding treaty law

Having established the voluntary PIC system through nonbinding instruments in 1989, the FAO Council and the UNEP Governing Coun-

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[82] FAO, Report of the twenty-seventh session of the Committee on Fisheries, Rome, 5–9 March 2007, FAO Fisheries Report No. 830, FIEL/R830, para. 68.

[83] Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, approved by FAO Members on 22 November 2009 at the Thirty-sixth Session of the FAO Conference.

[84] See above in this Part, at A.I.1c).

cil in two separate but coordinated decisions mandated their secretariats in 1994/1995 jointly to develop a draft of a binding convention.[85] After two years of negotiations, the Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (PIC Convention)[86] was signed in 1998. It entered into force in 2004 and has 131 Parties as of April 2010.[87]

Ever since the voluntary procedure of Prior Informed Consent had been established, the need for binding norms was debated. Developing states generally favoured such a transformation into binding law, and large exporters of pesticides such as the United States, Germany, the United Kingdom and Japan opposed it.[88] Believing that a binding convention would be more effective than the voluntary system, a coalition of some European Union and developing countries eventually succeeded when UNEP's Governing Council decided to establish a working group to explore the development of a legally binding instrument in 1991.[89] The issue received a further major political push through the Rio Conference in 1992, where it was included as an objective in chapter 19 of Agenda 21.[90]

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[85] FAO Council Decision CL 107/11 (November 1994); UNEP Governing Council Decision 18/12, (May 1995).

[86] Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (10 September 1998), 38 ILM 1 (1999), also available at http://www.pic.int/en/ConventionText/ONU-GB.pdf.

[87] General on the PIC Convention see C. Redgwell, "Regulating Trade in Dangerous Substances: Prior Informed Consent under the 1998 Rotterdam Convention" in: A. Kiss/D. Shelton/K. Ishibashi (eds.), Economic Globalization and Compliance with International Environmental Agreements, 2003, 75-88; N.S. Zahedi, "Implementing the Rotterdam Convention: the challenges of transforming aspirational goals into effective controls on hazardous pesticide exports to developing countries", Georgetown international environmental law review 11 (1999), 707-739; R.W. Emory, "Probing the protections in the Rotterdam Convention on Prior Informed Consent", Colorado journal of international environmental law and policy (2001), 47-69.

[88] R.L. Paarlberg, "Managing Pesticide Use in Developing Countries" in: P. M. Haas/R.O. Keohane/M.A. Levy (eds.), Institutions for the Earth: Sources of Effective International Environmental Protection, 1993, 309-350 (344 et seq.).

[89] UNEP Governing Council Decision 16/35 (1991).

[90] Agenda 21, as one of the central instruments adopted by the UNCED Conference at Rio de Janeiro, in chapter 19 para. 19.38 outlines the objective of "achieving full participation in and implementation of the PIC procedure, in-

This negotiation history illustrates the attitude of states towards binding norms. States which were supportive of strong international regulation advocated legally binding norms, and those with an interest in a weak regime opposed such a move. Other negotiations on the question of the legal nature of a particular instrument point in a similar direction. For instance, in the negotiations on an instrument of Access and Benefit Sharing (ABS) under the Convention for Biological Diversity, the issue of legal bindingness was a major negotiating issue. Developing states with an interest in a strong ABS regime strongly advocated a legally binding Protocol on Access and Benefit Sharing under the Convention on Biological Diversity.[91] A binding Protocol was eventually adopted in 2010: the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity.[92] State actors and other actors thus clearly distinguish between binding and nonbinding rules even in cases where international enforcement of binding rules would be unlikely. And, even though states may – empirically speaking – actually comply as much with nonbinding norms as with binding ones,[93] actors apparently have the perception that binding instruments give rise to more effective regimes.

The development of the PIC Convention is also a clear example of how nonbinding instruments can be a necessary first step in the development

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cluding possible mandatory applications through legally binding instruments contained in the Amended London Guidelines and in the FAO International Code of Conduct, taking into account the experience gained within the PIC procedure."

[91] At the 9th meeting of the ABS Working Group in 2010 in Cali, Columbia, "developing countries from the Latin America and the Caribbean Group (GRULAC), Asia-Pacific Group, African Group and the Like-Minded Megadiverse Countries (LMMC) noted that the nature of the draft protocol is not up for negotiation," compare Environmental Negotiation Bulletin, Vol. 9 No. 503 (2010), p. 3, available at http://www.iisd.ca/download/pdf/enb09503e.pdf.

[92] Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, adopted through Decision X/1 at the 10th Conference of the Parties to the Convention on Biological Diversity. The text of the Nagoya Protocol is available at http://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf.

[93] E. Brown Weiss, "Introduction" in: E. Brown Weiss (ed.), International Compliance with Nonbinding Accords, 1997, 1-20 (1).

of an international treaty. It is highly unlikely that the Convention would have been adopted without the prior existence of the voluntary PIC system.[94] The existence and functioning of the procedure may have convinced laggard states that a regime based on binding norms was conceivable and feasible. The voluntary norms also reduced the perception of complexity of the new legal regime for states, since state actors had already experience with the system.[95] The voluntary norms thus contributed to efficient negotiations (which only lasted two years) and possibly to the wide support the Convention enjoys today.

Given that with over 150 states participating,[96] more states embraced the voluntary PIC system than have ratified the PIC Convention today, one may ask if there was any added value of developing a binding Convention.[97] Irrespective of substantive changes, the shift by itself may be an achievement in terms of stability and legal certainty. The shift to binding norms can be understood as an expression of the need of states eventually to base a complex regime on clearly binding forms of law.[98] While states may not comply with a voluntary system without risking

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94 M.A. Mekouar, "Pesticides and Chemicals: The Requirement of Prior Informed Consent" in: D. Shelton (ed.), Commitment and Compliance: The Role of Non-Binding Norms in the International Legal System, 2000, 146-163 (163).

95 K. Kummer, "Prior Informed Consent for Chemicals in International Trade: The 1998 Rotterdam Convention", Review of European Community and International Environmental Law 8 (1999), 323-330 (329).

96 N.S. Zahedi, "Implementing the Rotterdam Convention: the challenges of transforming aspirational goals into effective controls on hazardous pesticide exports to developing countries", Georgetown international environmental law review 11 (1999), 707-739 (709).

97 Scholars often stress the effectiveness of the voluntary system, compare M.A. Mekouar, "Pesticides and Chemicals: The Requirement of Prior Informed Consent" in: D. Shelton (ed.), Commitment and Compliance: The Role of Non-Binding Norms in the International Legal System, 2000, 146-163 (163); D.G. Victor, "'Learning by Doing' in the Nonbinding International Regime to Manage Trade in Hazardous Chemicals and Pesticides" in: D.G. Victor/K. Raustiala/E.B. Skolnikoff (eds.), The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice, 1998, 221-281 (250); more critical of both the voluntary approach but also of the PIC Convention N.S. Zahedi, "Implementing the Rotterdam Convention: the challenges of transforming aspirational goals into effective controls on hazardous pesticide exports to developing countries", Georgetown international environmental law review 11 (1999), 707-739.

98 J.E. Alvarez, International Organizations as Law-makers, 2005, 232.

great reputational damage, this may not be the case with binding norms, because such a breach would contradict the legitimate expectations of the other actors in a much greater way. Only binding forms of law may therefore be able to provide the degree of trust which is the source of legal certainty and stability in international law and which ultimately secures long-term cooperation.

(ii) Comparing the voluntary and binding PIC systems

A comparison of the PIC Convention and voluntary PIC system shows the great extent to which the voluntary PIC system influenced the legally binding PIC regime.

The PIC procedure in the PIC Convention is almost entirely modelled on the voluntary PIC system as it was foreseen in the voluntary instruments and as it had been further developed in the first years in practice.[99] Its development shows that nonbinding instruments can contribute much more to treaty law development than merely shaping general discourse. Rather, the voluntary PIC system provided a complex and detailed model which only had to be copied into treaty form.[100]

One of the main contributions and advantages of the voluntary system was that it enabled a learning process. As has been outlined above,[101] the voluntary PIC system was subject to numerous changes and adjustments that could – mainly due to the nonbinding nature of the instruments – easily be implemented by the expert group on PIC on the basis

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[99] J. Ross, "Legally Binding Prior Informed Consent", Colorado Journal of International Environmental Law and Policy 10 (1999), 499-529 (519); N.S. Zahedi, "Implementing the Rotterdam Convention: the challenges of transforming aspirational goals into effective controls on hazardous pesticide exports to developing countries", Georgetown international environmental law review 11 (1999), 707-739 (714). One of the few changes was the expansion of the definitional scope with respect to hazardous pesticides formulations. Whereas the FAO Pesticide Code and the Guidelines only covered "acutely hazardous pesticide formulations", Article 2 (a) and (c) PIC Convention now include the somewhat broader category of "severely hazardous pesticide formulations". Compare K. Kummer, "Prior Informed Consent for Chemicals in International Trade: The 1998 Rotterdam Convention", Review of European Community and International Environmental Law 8 (1999), 323-330 (325).

[100] Step 4 of the FAO Guidelines on the operation of prior informed consent (PIC), Report of the 25th session of the FAO Conference, Appendix E, available at http://www.fao.org/docrep/x5588e/x5588e0l.htm.

[101] Compare the case study in Part 1, at B.II., further above.

of practical experiences and feedback from states and organisations. The voluntary PIC system had therefore already undergone a learning period before discussions on the PIC Convention started. The Convention then codified the practice as it had emerged under the voluntary system.[102] For example, as outlined above,[103] the FAO/UNEP Joint Expert Group had enlarged the definitional scope of the PIC system to also consider substances which were not subject to any regulatory action because they were withdrawn from the domestic market. It had appeared under the voluntary system that manufacturers in particular in the US voluntarily took substances from the market as a result of negotiations between government agencies and manufacturers. The U.S. Environment Protection Agency, for instance, initiated voluntary cancellations or voluntary restrictions through negotiations with companies rather than formally regulating these substances.[104] Without any formal regulatory action by the EPA, the substances were not "banned" or "severely restricted" and consequently could not enter the PIC system. Companies could thus still export these substances without informing the importing state. The practice of the UNEP/FAO Joint Group nevertheless to include such substances is now codified in the PIC Convention. Its wide definition of "final regulatory action" ensures that the terms "banned" and "severely restricted" encompass the voluntary withdrawal of a substance from the market or from the domestic authorization process.

The adoption of a treaty – even if it includes flexible amendment procedures – usually renders it more difficult to pursue this kind of flexible learning processes. Under the PIC Convention, for instance, any decision of the expert committee on the listing of a chemical in Annex III requires a consensus decision of the Conference of the Parties.[105] The

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[102] For a similar assessment K. Kummer, "Prior Informed Consent for Chemicals in International Trade: The 1998 Rotterdam Convention", Review of European Community and International Environmental Law 8 (1999), 323-330 (329); M.A. Mekouar, "Pesticides and Chemicals: The Requirement of Prior Informed Consent" in: D. Shelton (ed.), Commitment and Compliance: The Role of Non-Binding Norms in the International Legal System, 2000, 146-163 (163).

[103] See the case study in Part 1, at B.II., further above.

[104] N.S. Zahedi, "Implementing the Rotterdam Convention: the challenges of transforming aspirational goals into effective controls on hazardous pesticide exports to developing countries", Georgetown international environmental law review 11 (1999), 707-739 (717 et seq.).

[105] PIC Convention, Article 22 (5) b).

kind of flexible adjustments that were undertaken by the experts under the voluntary PIC system are thus no longer possible.

The need for these learning processes increases with the complexity of the issues and uncertainty regarding the underlying processes. As environmental problems are typically defined by particular complexity and uncertainty, nonbinding instruments have much to contribute as learning frameworks. Institutionalisation of follow-up procedures and the establishment of expert bodies in the case of the voluntary PIC system helped to ensure that the instrument could play this role.

Successful learning processes that are stimulated by a nonbinding instrument require that actors carefully consider when to shift to a binding form of cooperation. There may be a considerable trade-off between flexibility and learning on the one hand and the value of having binding legal rules on the other. Considering that the PIC Convention basically copied the nonbinding system but did not substantively move the issue forward, it could have been more effective to postpone this codification. Indeed, some commentators considered the development of the PIC Convention premature because not enough had been learned with respect to the implementation of the voluntary PIC procedure.[106] The voluntary PIC system had just started to function when important actors turned to new negotiations instead of learning from the implementation of the existing rules. Codification in a treaty also led to the loss of information and experience. According to Victor's study of lists of participants, the shift to negotiations for a binding convention led to a shift of responsibility within governments away from operational ministries on agriculture to foreign ministries. This meant that many of those government officials who had participated in the implementation of the voluntary system did not participate in the negotiations of the PIC Convention.[107] In addition, the shift to negotiations for binding rules added considerable costs.[108]

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[106] J. Ross, "Legally Binding Prior Informed Consent", Colorado Journal of International Environmental Law and Policy 10 (1999), 499-529 (524); D.G. Victor, "'Learning by Doing' in the Nonbinding International Regime to Manage Trade in Hazardous Chemicals and Pesticides" in: D.G. Victor/K. Raustiala/E.B. Skolnikoff (eds.), The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice, 1998, 221-281 (264).

[107] D.G. Victor, "'Learning by Doing' in the Nonbinding International Regime to Manage Trade in Hazardous Chemicals and Pesticides" in: D.G. Victor/K. Raustiala/E.B. Skolnikoff (eds.), The Implementation and Effectiveness

Apart from making the voluntary PIC system binding, the PIC Convention does not make any substantive changes the previous PIC system. Unlike the Basel Convention, the new treaty for example does not prohibit certain particularly dangerous exports – they are merely subjected to a PIC procedure.[109] Although also modelled upon a voluntary PIC system, the shift to a legally binding regime in the case of the Basel Convention also led to a substantive widening of its scope. The difference between the two conventions can at least in part be explained by the high-profile character of the negotiations of the Basel Convention which were accompanied by scandals of illicit waste disposal practices.[110] This shows that the relative few changes undertaken in the establishment of the PIC Convention should not be generalised in the sense that a shift to binding rules may not also stimulate further substantive development.[111] Nonbinding instruments may help to forge consensus on a specific issue while leaving more meaningful cooperation to a legally binding regime once actors accept the necessity or once public pressure rises. In the case of the PIC Convention, proposals for an expansion failed. For example, proposals of a group of states led by the European Union favouring a broader framework convention for

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of International Environmental Commitments: Theory and Practice, 1998, 221-281 (260).

[108] D.G. Victor, "'Learning by Doing' in the Nonbinding International Regime to Manage Trade in Hazardous Chemicals and Pesticides" in: D.G. Victor/K. Raustiala/E.B. Skolnikoff (eds.), The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice, 1998, 221-281 (259).

[109] This is also criticised and suggested as a possible improvement for the PIC Convention by N.S. Zahedi, "Implementing the Rotterdam Convention: the challenges of transforming aspirational goals into effective controls on hazardous pesticide exports to developing countries", Georgetown international environmental law review 11 (1999), 707-739 (737).

[110] C. Redgwell, "Regulating Trade in Dangerous Substances: Prior Informed Consent under the 1998 Rotterdam Convention" in: A. Kiss/D. Shelton/K. Ishibashi (eds.), Economic Globalization and Compliance with International Environmental Agreements, 2003, 75-88 (79).

[111] K. Kummer, "Prior Informed Consent for Chemicals in International Trade: The 1998 Rotterdam Convention", Review of European Community and International Environmental Law 8 (1999), 323-330 (330).

chemicals were not supported by another group of industrialised states led by the United States of America.[112]

There is one noteworthy procedural difference between the voluntary procedure and the binding Convention. It concerns the decision on which substances are subjected to the prior informed consent procedure. While the voluntary system allowed the joint expert group to make the listing decision, under the PIC Convention the decision must be taken by consensus of state parties represented in the Conference of the Parties.[113] The expert body of the PIC Convention – the Chemical Review Committee – only makes proposals for listings or removals from the list and prepares the respective decision guidance documents.[114] In contrast to the voluntary system where the decisions of the UNEP/FAO Joint Expert Group were not subject to approval by a political body,[115] the PIC Convention now in fact gives a veto to any state on such listings.

This politicisation of the science input may be part of the price to be paid for a binding Convention, because states tend to seek greater political control over decisions that will be legally binding for them. Any single state can now block the procedure, which increases the danger of lobbying by a single producer for a veto.[116] The PIC Convention is thus blocked politically in its central mechanism on a number of dangerous substances. For example, the unanimous decision of the experts to recommend the inclusion of chrysotile asbestos in the respective Annex III which was already made in 2005[117] could not be agreed upon in the three following meetings of the Conferences of the Parties in 2005, 2006 and 2008. A number of asbestos producing countries did not question the soundness of the scientific assessment, but nevertheless opposed the

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[112] K. Kummer, "Prior Informed Consent for Chemicals in International Trade: The 1998 Rotterdam Convention", Review of European Community and International Environmental Law 8 (1999), 323-330 (325).

[113] PIC Convention, Article 22 (5) (b).

[114] PIC Convention, Article 5-9.

[115] See the analysis in Part 2, at B.II., further above.

[116] N.S. Zahedi, "Implementing the Rotterdam Convention: the challenges of transforming aspirational goals into effective controls on hazardous pesticide exports to developing countries", Georgetown international environmental law review 11 (1999), 707-739 (727).

[117] Report of the Chemical Review Committee on the work of its first Meeting, UNEP/FAO/RC/CRC.1/28 (2005), Annex I.B.

listing.[118] Similar problems exist with regard to other substances. Only one chemical of lesser economic importance – tributyl tin compounds – was listed in three meetings of the Conference of the Parties despite numerous recommendations by the Review Committee to list.[119] These difficulties have thrown serious doubts on the effectiveness of the linkage to consensus decision of the Conference of the Parties for so-called "live chemicals", i.e. chemicals of continuing economic importance.[120]

2. The supplementary function of nonbinding instruments

Nonbinding instruments often function as supplements to treaty norms. Where treaty law is insufficiently precise, nonbinding instruments play a supplementary role by providing concretisations, guidance for interpretation, or by serving as standards that gain legal significance through references in treaties.

a) Interpretation and concretisation of treaty law through nonbinding instruments

Nonbinding instruments frequently serve as tools to concretise and clarify international legal principles and rules.[121] Regarding treaty law, this may happen in several ways.

First, nonbinding instruments provide definitions or criteria to concretise, clarify or delimit general or vague terms of a rule of international

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[118] Environmental negotiation bulletin, Summary report of the 4th Conference of the Parties of the PIC Convention in 2008, available at http://www.iisd.ca/download/pdf/enb15168e.pdf.

[119] Endosulfin has been recommended for listing by the Chemicals Review Committee in 2006, but was not included by the Conference of the Parties neither in its meeting in 2006 nor in 2008.

[120] International Institute for Sustainable Development, Environmental negotiation bulletin, Summary report of the 4th Conference of the Parties of the PIC Convention in 2008, available at http://www.iisd.ca/download/pdf/enb15168e.pdf.

[121] J.E. Alvarez, "International Organizations: Then and Now", American Journal of International Law 100 (2006), 324-347 (329); U. Fastenrath, "Relative Normativity in International Law", European Journal of International Law 4 (1993), 305-340 (315).

Annex 525

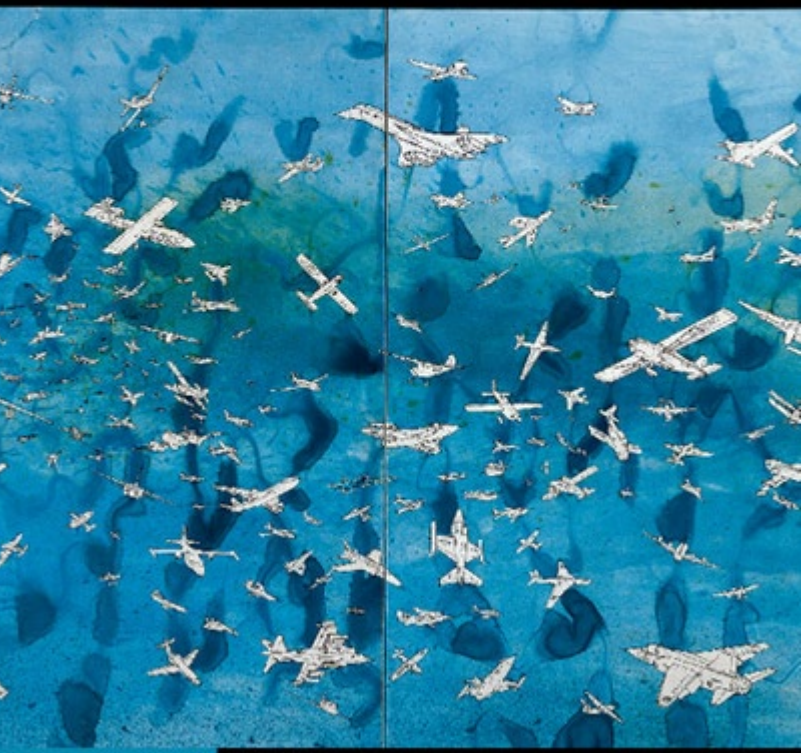
J. Crawford, *State Responsibility* (Cambridge University Press, 2013), pages 480-505

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15 Reparation

15.1 The basic principle

The classic general statement of the consequences of an internationally wrongful act was made by the Permanent Court in the *Chorzów Factory* case, in the following words: '[i]t is a principle of international law that the breach of an engagement involves an obligation to make reparation in an adequate form.'[1] The *Chorzów Factory* case was brought by Germany against Poland in relation to injury suffered by two German companies when Poland took possession of the factory in question. The Permanent Court was using the term 'reparation' in its most general sense.[2] It was rejecting Poland's argument that the Court's jurisdiction to interpret and apply the relevant treaty did not entail jurisdiction to deal with disputes over the form and amount of reparation to be made.[3]

In a subsequent phase of the same case, the Permanent Court went on to specify the content of the obligation to make reparation in more detail:

> The essential principle contained in the actual notion of an illegal act – a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals – is that reparation must, as far as

[1] *Factory at Chorzów*, Jurisdiction, (1927) PCIJ Ser. A No. 9, 21.
[2] Crawford, Third Report, 17.
[3] The Court went on to state that '[r]eparation therefore is the indispensable complement of a failure to apply a convention and there is no necessity for this to be stated in the convention itself. Differences relating to reparations, which may be due by reason of failure to apply a convention, are consequently differences relating to its application': *Factory at Chorzów*, Jurisdiction, (1927) PCIJ Ser. A No. 9, 21. On the issue of jurisdiction to award reparation, see Chapter 19. By this stage of the dispute, Germany was already no longer seeking the return of the factory in question or of the property seized with it: *Factory at Chorzów*, Jurisdiction, (1927) PCIJ Ser. A No. 9, 17.

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possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed.[4]

This definition of the obligation to make reparation, emphasizing its function of re-establishing the *status quo ante*, has been reaffirmed on numerous occasions, by the International Court,[5] investment tribunals,[6] international human rights courts and committees,[7] and other bodies.[8]

15.2 'Full' reparation

15.2.1 The position taken in the ARSIWA

During the drafting of the ARSIWA, members of the ILC raised concerns about the obligation to provide 'full' reparation. These included the objection that what is required is not 'full' reparation but 'as much reparation as possible' and the objection that in determining reparation due, a responsible state's ability to pay should be taken into account.[9] On the other hand, there was a feeling that as the expression 'full reparation' had appeared in the Draft Articles and had not been criticized to a significant extent by governments, the expression should be retained.[10] The Drafting Committee ultimately decided not to include any term qualifying the expression 'full reparation'. In explanation, it merely stated that 'the Committee had decided to retain the wording of the article adopted on first reading as a statement of the general principle of reparation'.[11] It was nonetheless clearly accepted that the obligation to provide 'full reparation' only requires the elimination of the

[4] *Factory at Chorzów*, (1928) PCIJ Ser. A No. 17, 47.

[5] See, e.g., *Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia and Herzegovina* v. *Serbia and Montenegro)*, ICJ Rep. 2007 p. 43, 232; *Ahmadou Sadio Diallo (Guinea* v. *DRC)*, ICJ, 30 November 2010.

[6] See, e.g., *CME* v. *Czech Republic*, Partial Award, (2001) 9 ICSID Reports 121, 239.

[7] See, e.g., *Papamichalopoulos* v. *Greece*, [1995] ECtHR 14556/89; *Velásquez Rodríguez case*, [1989] IACtHR Ser. C No. 7.

[8] See, e.g., *Final Award: Eritrea's Damages Claims*, (2009) 26 RIAA 505, 524; *Final Award: Ethiopia's Damages Claims*, (2009) 26 RIAA 631, 651. ARSIWA, Pt II, which contains the articles dealing with reparation, applies only in relation to obligations owed to states and so does not apply to situations in which the responsibility of a state is invoked by a non-state entity, such as pursuant to procedures available under human rights treaties and investment protection agreements. However, in many of these cases, the international law of state responsibility concerning reparation is nonetheless applied by analogy.

[9] ILC Ybk 2000/II(2), 27.

[10] Ibid.

[11] ILC Ybk 2000/I, 388 (Chairman of the Drafting Committee).

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consequences of a wrongful act 'as far as possible', as stated in the *Chorzów Factory* case.[12]

Concerns about the potential inability of states to provide reparation due did, however, influence the wording of several other provisions of the ARSIWA. Draft Article 42(3) had stated that '[i]n no case shall reparation result in depriving the population of a State of its own means of subsistence'. Some members of the ILC considered that the provision was of critical importance for developing states. However, both ILC members and governments commented that such a provision would be open to abuse.[13] Importantly, there was no historical example which supported the retention of the provision. Instances in which compensation payments had been delayed could be explained on the basis of the defences of necessity or distress and in other instances full reparation had been waived.[14] The issue was better addressed in the individual provisions dealing with the different forms of reparation and in the context of countermeasures.[15]

This change was made on the second reading. The ARSIWA state that restitution is only required to the extent that it 'does not involve a burden out of all proportion to the benefit deriving from restitution instead of compensation',[16] and that satisfaction 'shall not be out of proportion to the injury'.[17] The main concern was the potentially crippling effect of compensation payments.[18] In the ARSIWA, the quantum of compensation payable is limited by the requirement of causation (discussed in further detail below).[19] However, situations could arise in which crippling compensation payments would not be excluded by this requirement.[20] Article 50, dealing with countermeasures, to some extent addresses this concern, stating that '[c]ountermeasures shall not affect ... obligations for the protection of fundamental human rights'.[21] The commentary refers to the ICCPR and ICESCR and the fact that under these instruments '[i]n no case may a people be deprived of its own

[12] ILC Ybk 2000/II(2), 29; *Factory at Chorzów*, (1928) PCIJ Ser. A No. 17, 47. See also ARSIWA Commentary, Art. 31, §2.
[13] ILC Ybk 2000/II(2), 27. [14] Crawford, Third Report, 21; ILC Ybk 2000/II(2), 28.
[15] ILC Ybk 2000/II(2), 25; ILC Ybk 2000/I, 13 (Simma). The Special Rapporteur also stated that '[e]specially given concerns about limiting to a reasonable extent the burden of reparation, [a principle of mitigation of damage] should also be included in the proposed article': Crawford, Third Report, ILC Ybk 2000/II(1), 62.
[16] ARSIWA, Art. 35(b). [17] ARSIWA, Art. 37(3).
[18] Crawford, Third Report, 20–1; ILC Ybk 2000/II(2), 39.
[19] ARSIWA Commentary, Art. 34, §5. [20] ILC Ybk 2000/I, 24 (Crawford).
[21] ARSIWA, Art. 50(1)(b).

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means of subsistence'.[22] While this provision could protect a state from countermeasures were it unable to make a compensation payment, and the defences of necessity and duress could entitle a state to delay payment of compensation, neither of these considerations can affect the quantum of compensation due, consistent with previous state practice.

15.2.2 Subsequent case law

The Eritrea–Ethiopia Claims Commission appeared to take the view that the potentially crippling effect of a compensation payment could be considered in determining its quantum. The Claims Commission ultimately held that it did not need to decide the issue,[23] presumably because it awarded a net payment of only US$11 million to Ethiopia.[24] Nonetheless, it addressed the issue at some length. It referred to the ILC's deletion of Draft Article 42(3) but stated:

> Awards of compensation of the magnitude sought by each Party would impose crippling burdens upon the economies and populations of the other, notwithstanding the obligations both have accepted under the Covenants. Ethiopia urged the Commission not to be concerned with the impact of very large adverse awards on the affected country's population, because the obligation to pay would fall on the government, not the people. The Commission does not agree. Huge awards of compensation by their nature would require large diversions of national resources from the paying country – and its citizens needing health care, education and other public services – to the recipient country. In this regard, the prevailing practice of States in the years since the Treaty of Versailles has been to give very significant weight to the needs of the affected population in determining amounts sought as post-war reparations.
>
> Article 5(13) of the December 2000 Agreement directs that, '[i]n considering claims, the Commission shall apply relevant rules of international law,' which include rules of human rights law applicable as between the Parties. Accordingly, the Commission could not disregard the possibility that large damages awards might exceed the capacity of the responsible State to pay or result in serious

[22] ARSIWA Commentary, Art. 50, §7; International Covenant on Civil and Political Rights, 19 December 1966, 999 UNTS 171, Art. 1(2); International Covenant on Economic, Social and Cultural Rights, 16 December 1966, 993 UNTS 3, Art. 1(2).

[23] *Final Award: Eritrea's Damages Claims*, (2009) 26 RIAA 505, 524; *Final Award: Ethiopia's Damages Claims*, (2009) 26 RIAA 631, 651.

[24] *Final Award: Eritrea's Damages Claims*, (2009) 26 RIAA 505, 630; *Final Award: Ethiopia's Damages Claims*, (2009) 26 RIAA 631, 770. Ethiopia's Group Number One damages claims amounted to approximately US$7.4 billion and its Group Number Two damages claims amounted to approximately US$6.9 billion, which the Claims Commission determined was more than three times Eritrea's estimated total national product in 2005. Eritrea's claims against Ethiopia amounted to approximately US$6 billion: *Final Award: Eritrea's Damages Claims*, (2009) 26 RIAA 505, 522.

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injury to its population if such damages were paid. It thus considered whether it was necessary to limit its compensation awards in some manner to ensure that the ultimate financial burden imposed on a Party would not be so excessive, given its economic condition and its capacity to pay, as to compromise its ability to meet its people's basic needs.[25]

The Claims Commission relied on limited practice to support the proposition that 'the prevailing practice of States in the years since the Treaty of Versailles has been to give very significant weight to the needs of the affected population in determining amounts sought as post-war reparations'.[26] It relied, for example, on the Treaty of Peace with Japan[27] which, as explained in the ILC debates, was a situation in which full reparation was waived and which does not provide guidance regarding the general principles to be used in determining the quantum of compensation owed.[28]

The UN Compensation Commission provides an example of a situation in which the principle of full reparation has been given effect despite financial hurdles. In Resolution 687, the Security Council decided to create a commission to deal with claims resulting from Iraq's invasion and occupation of Kuwait, as well as a fund to pay compensation payments held to be due by the commission.[29] The resolution stated that the Secretary-General was to recommend

> mechanisms for determining the appropriate level of Iraq's contribution to the Fund, based on a percentage of the value of its exports of petroleum and petroleum products, not to exceed a figure to be suggested to the Council by the Secretary-General, taking into account the requirements of the people of Iraq, Iraq's payment capacity as assessed in conjunction with the international financial institutions taking into consideration external debt service, and the needs of the Iraqi economy . . .[30]

While Iraq's ability to pay was considered in establishing the Compensation Commission, it only affected the method by which compensation

[25] *Final Award: Eritrea's Damages Claims*, (2009) 26 RIAA 505, 523–4; *Final Award: Ethiopia's Damages Claims*, (2009) 26 RIAA 631, 650–1.

[26] *Final Award: Eritrea's Damages Claims*, (2009) 26 RIAA 505, 523 n. 11, and *Final Award: Ethiopia's Damages Claims*, (2009) 26 RIAA 631, 651 n. 11, both citing *Decision Number 7: Guidance Regarding* Jus ad Bellum *Liability*, (2007) 26 RIAA 10, 17–19.

[27] Treaty of Peace with Japan, 8 September 1951, 136 UNTS 45.

[28] ILC Ybk 2000/II(2), 28. See also Treaty of Peace with Japan, 8 September 1951, 136 UNTS 45, Art. 14(b).

[29] SC Res. 687 (1991), §18. See also SC Res. 692 (1991), §3.

[30] SC Res. 687 (1991), §19. For the Secretary-General's recommendations, see UN Doc. S/22559 (1991), UN Doc. S/22661 (1991).

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payments were to be met; it did not affect Iraq's obligation to provide full reparation.[31] Since 2003, the percentage that Iraq contributes to the UN Compensation Commission Compensation Fund has been set at 5 per cent, though it has been as high as 30 per cent in the past.[32] As at July 2012, the Compensation Commission had made US$37.7 billion available for distribution to successful claimants.[33]

15.3 The notion of injury

15.3.1 Injury defined

Although the term 'damage' appeared in the Draft Articles of 1996 under the rubrics of 'compensation' and 'satisfaction', they contained no comprehensive definition of the term.[34] In 2000, the Drafting Committee proposed such a definition in a provision which read:

(1) The responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act.
(2) Injury consists of any damage, whether material or moral, arising in consequence of the internationally wrongful act of a State.[35]

It is not correct to say that injury 'consists' of damage. While damage may sometimes be the gist of injury, that is, the legal wrong done to another arising from a breach of an obligation, in other cases it may not be, and it is also possible for there to be damage without any legal wrong (*damnum sine iniuria*).[36] This is reflected in the final wording of Article 31, which states that '[i]njury *includes* any damage, whether material or moral, caused by the internationally wrongful act of a State'.[37] The formulation is perhaps inelegant, but criticisms that no difference is made between the concepts of injury and damage are misplaced.[38]

The commentary to Article 31 reaffirms that there is no general requirement of damage as a necessary element of an internationally

[31] On the challenges of mass claims procedures generally, see Chapter 20.
[32] SC Res. 986 (1995), §8(c); SC Res. 1483 (2003), §21. See also Holtzmann and Kristjánsdóttir (eds.), *International Mass Claims Processes: Legal and Practical Perspectives* (2007), 358–9; SC Res. 705 (1991), §2; SC Res. 1330 (2000), §12. This method of funding the compensation payments has been a source of tension and problems in the early life of the Claims Commission and ultimately led to the establishment of the 'oil-for-food' programme: Holtzmann and Kristjánsdóttir (2007), 358–9.
[33] UNCC, Press Release, 26 July 2012, available at www.uncc.ch/pressrel.htm.
[34] Draft Articles, Arts. 44(2), 45(1). [35] ILC Ybk 2000/II(2), 68.
[36] Crawford, Fourth Report, 9. [37] ARSIWA, Art. 31(2) (emphasis added).
[38] See e.g. Stern (2010) 563, 569.

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wrongful act.[39] Rather, the precise character of damage, if any, required for responsibility to arise depends on the primary obligation in question. For example, some environmental conventions require 'significant' damage.[40] In the WTO system, when an obligation under one of the covered agreements is infringed, there is presumed to be damage (a 'nullification or impairment' of benefits).[41] In the light of the wide range of primary obligations, it was not possible for the ILC to formulate a more specific provision defining injury. In the present state of international law, it would be wrong to presume any specific definition of 'injury' or 'damage' which is applicable across the board. The various primary obligations of states do not derogate as a *lex specialis* from a general rule about injury or damage. Rather, each obligation is tailored to meet the particular requirements of the context.

Beyond meeting any requirement of damage contained in a primary obligation, whether a wrongful act causes damage, along with its character, is highly material in determining the quantum and form of reparation due. For example, were state A to take wrongful possession of state B's ship, restitution would be the appropriate remedy. If the ship were damaged in the process, compensation would also be appropriate, and the quantum of compensation due would depend on the extent of the damage. If the ship were seriously damaged, state B might elect compensation equal to the value of the ship and forgo restitution.

15.3.2 Material and moral injury

Article 31 defines injury to include 'damage, whether material or moral'. The commentary explains that the 'formulation is intended both as inclusive, covering both material and moral damage broadly understood, and as limitative, excluding merely abstract concerns or general interests of a State which is individually unaffected by the breach'.[42]

Material damage refers to damage to property or other substantive interests of a state and its nationals which is assessable in financial terms. Moral damage encompasses two distinct concepts: moral damage to a state and moral damage to a state's nationals. Moral damage to

[39] ARSIWA Commentary, Art. 31, §6. See further Chapter 2.
[40] For example, the Convention on the Law of the Non-Navigational Uses of International Watercourses, 21 May 1997, GA Res. 51/229 (1997) (not yet in force), Art. 7.
[41] Marrakesh Agreement establishing the World Trade Organization, 15 April 1994, 1867 UNTS 3, Annex 2: Understanding on Rules and Procedures Governing the Settlement of Disputes, Art. 3(8).
[42] ARSIWA Commentary, Art. 31, §5.

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individuals includes such things as individual pain and suffering, loss of loved ones or the personal affront associated with an intrusion into one's home or private life. Moral damage to a state refers to injury which is not financially assessable but amounts to an affront to the state, for example a violation of its sovereignty or territorial integrity.[43]

There was concern among members of the ILC regarding the use of the expression 'moral damage', given the differing conceptions of 'moral damage' in various national legal systems. There are obvious difficulties in using terms drawn from national law which have not developed autonomously in international law. This is true not only due to the differing conceptions of 'moral damage' but also because 'moral damage' in domestic law is concerned solely with moral damage to individuals.[44] Despite these concerns, use of the term was considered necessary to convey the broad meaning of 'injury'.[45] So long as the kinds of non-material loss which may be compensable are not forced into any single theory of moral damage, it is appropriate to use the term.[46]

15.3.3 'Legal injury'?

An issue not addressed in the ARSIWA or the Commentary is whether 'injury' includes a notion of 'legal injury', meaning injury arising from the mere fact of the breach of an international obligation. When the issue was raised during the final adoption of the commentary, Simma stated that 'a lack of consensus on th[e] issue seemed to have been "papered over" at some stage'.[47] The issue was not able to be resolved and so the mention of legal injury was deleted from the commentary.[48] In the event, Simma was correct: Article 31 arguably does little more than paper over some difficult issues.

But the better view is that no notion of 'legal injury' is included within the Article 31 concept of injury, for two reasons. First, the forms of reparation available in the ARSIWA (restitution, compensation and satisfaction) address material and moral damage only.[49] At times, satisfaction has been described as being available for 'non-material' injury, which could be considered broad enough to include 'legal injury'.[50] However, the position taken in the ARSIWA is clearly that satisfaction

[43] ARSIWA Commentary, Art. 37, §§3–4. [44] Crawford, Fourth Report, 9.
[45] ILC Ybk 2000/I, 388 (Chairman of the Drafting Committee).
[46] Crawford, Fourth Report, 9. [47] ILC Ybk 2001/I, 264 (Simma). [48] Ibid., 264–5.
[49] ARSIWA Commentary, Art. 31, §5; ibid., Art. 36, §1.
[50] E.g., Crawford, Third Report, 52. See also *Rainbow Warrior (New Zealand/France)*, (1990) 20 RIAA 215, 272–3.

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is available to make good moral damage and not to remedy the mere breach of an international obligation. As is stated in the commentary, satisfaction is 'rather exceptional' and 'the remedy for those injuries, not financially assessable, which amount to an affront to the State'.[51] It would not be logical to require 'full reparation for ... injury' including 'legal injury' where none of the available forms of reparation can address that type of damage.[52] Second, if injury did include 'legal injury' due to the mere fact of breach, then what the ARSIWA defines as a 'State other than an injured State' would suffer 'injury', a terminological inconsistency. This point was made by the United Kingdom, which stated:

> The Chairman of the Drafting Committee has stated that '"[m]oral" damage could be taken to include not only pain and suffering, but also the broader notion of injury, which some might call "legal injury" ... to States'. It is not clear what is meant by 'legal injury', but it is possible that the term may be understood to include that type of legal injury which is suffered by each party to a treaty by virtue only of the fact that the treaty is violated by another party. Such an interpretation would entail a conflation of the categories of 'injured State' (draft art. 43) and 'interested State' (draft art. 49) ... [I]f the distinction between injured and interested States is to be retained, draft article 31 will need to be re-examined in the light of the definition of the 'injured State' in draft article 43, and in the light of the definition of damage implicit in draft article 37.[53]

The failure of the ILC to recognize 'legal injury' within the Article 31 concept of injury has been criticized by some. For example, it has been said:

> No remedy is, then, provided for breaches of international obligations where no material or moral damage has occurred, so the somewhat paradoxical conclusion would be that, after directly announcing in Article 1 that injury is not a necessary condition to generate responsibility, the subsequent articles inexorably require injury (material or moral) in order for responsibility to arise. That is equivalent to saying that there is no responsibility without injury (material or moral), which flies in the face of Article 1 ...[54]

[51] ARSIWA Commentary, Art. 37, §§1, 3. See also ibid., Art. 31, §5.
[52] See also Barboza, in Ragazzi (2005) 7, 9.
[53] ILC Ybk 2001/II(1), 58–9. See also ILC Ybk 2000/II(2), 32: 'The concept of damage was also considered indispensable by some members if the essential distinction was to be drawn between a State suffering direct injury on the basis of which it could invoke article [31], and one that, in the framework of *erga omnes* obligations or as a member of the international community, merely had a legal interest in cessation of the internationally wrongful act.'
[54] Barboza (2005), 9.

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This is not correct. The absence of material or moral damage does not mean that no responsibility arises. It merely means that there is no damage for which reparation is due. Responsibility still arises where there is only 'legal injury', but the consequences of such responsibility are limited to the obligation of cessation and the provision of assurances and guarantees of non-repetition, if appropriate.[55]

Under Article 48, a 'State other than an injured State' is entitled to invoke the responsibility of a responsible state if: (i) 'the obligation breached is owed to a group of States including that State, and is established for the protection of a collective interest of the group'[56] (an obligation *erga omnes partes*), or (ii) 'the obligation breached is owed to the international community as a whole'[57] (an obligation *erga omnes*). Several commentators have suggested that 'State[s] other than an injured State' suffer 'legal injury' where an obligation *erga omnes* or *erga omnes partes* is breached. Thus Wyler and Papaux state:

> From the point of view of responsibility, any breach of an 'integral' obligation creates a legal injury to every State in the international community ... The fact that [Article 48] may in certain respects be problematic – in particular due to the distinction drawn between the categories of 'injured States' and 'States other than an injured State' ... – does not affect, so it seems, the reality of the legal injury suffered by *all* States.[58]

Stern states that 'all breaches of international law create a legal injury suffered by those to whom the obligation breached is owed (whether a single State, a group of States or the international community as a whole)'.[59] Even though one might take issue with describing the effect on 'State[s] other than an injured State' as 'injury', such states clearly are legally affected by and interested in breaches of obligations *erga omnes* and *erga omnes partes*.[60] Pursuant to Article 48(2)(a), such states may seek cessation and assurances and guarantees of non-repetition in their own interest (or rather in the interest of the group or the international community).

Such breaches should not be referred to as causing 'legal injury'. Although a convenient shorthand, it is accurate to say in full that what is at issue is the breach of an obligation which has not caused material or

[55] ARSIWA, Art. 30. [56] ARSIWA, Art. 48(1)(a). [57] ARSIWA, Art. 48(1)(b).
[58] Wyler and Papaux, in Crawford, Pellet and Olleson (2010) 623, 627 (emphasis in original).
[59] Stern, in Crawford, Pellet and Olleson (2010) 193, 198.
[60] See Chapter 11, and especially the discussion of *Belgium* v. *Senegal*, ICJ, 20 July 2012.

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moral damage. Stern, for one, argues that the terminology 'legal injury' is appropriate and that 'State[s] other than an injured State' should in fact also be considered 'injured States'. She argues:

> It is at the least curious that some States may invoke the responsibility of another State even if they are not injured. If a State is the beneficiary of an obligation which is violated, it is difficult to see why it should not be considered to be an injured State ... [I]t seems that all States able to invoke international responsibility should be considered to be injured States; if that is not the case, what is the justification for the fact that they may have a cause of action against the author of the internationally wrongful act?[61]

This use of the word 'injury' conflicts with its natural meaning: harm, material or moral, suffered by the victim as obligee or beneficiary of the obligation breached.[62] More importantly, it is not correct to say that only a state which is injured may invoke the responsibility of a responsible state. That view is redolent of the outdated bilateral conception of relations between states. Such an understanding of interstate relations is captured in Special Rapporteur Ago's statements, rooted in earlier theories of responsibility, especially that of Anzilotti, that there is always a 'correlation between a legal obligation on the one hand and a subjective right on the other' and that it is 'perfectly legitimate, in international law, to regard the idea of the breach of an obligation as the exact equivalent of the idea of the impairment of the subjective rights of others'.[63]

International law was slow to develop a notion of 'public interest standing' in areas where the law does not have as its purpose the creation of synallagmatic rights and obligations.[64] This can be seen from the International Court's decision in the second phase of the *South West Africa* cases. The Court there held, on the casting vote of the president, that Ethiopia and Liberia's claim regarding South Africa's administration of South West Africa (now Namibia) was inadmissible. The ostensible reason for this decision was that the claim did not involve subjective rights of the claimant states.[65] In the Court's subsequent

[61] Stern (2010) 193, 196–7. Stern still suggests that as 'injured States', what are now described as 'State[s] other than an injured State' would still only be entitled to invoke the obligation of cessation and the obligation to provide assurances and guarantees of non-repetition: ibid., 198–200.

[62] Crawford, (2002) 96 AJIL 874, 881.

[63] Ago, Second Report, ILC Ybk 1970/II, 192.

[64] See further Crawford, in Andenas (ed.), 2 *Judicial Review in International Perspective: Liber Amicorum in Honour of Lord Slynn of Hadley* (2000) 23, 24.

[65] *South West Africa,* Second Phase, ICJ Rep. 1966 p. 6, 28, 51. See further Crawford (2000), 24–5.

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'apology' in the *Barcelona Traction* case,[66] it recognized the existence of legal relationships beyond traditional bilateral relations. In an often cited paragraph, the Court drew a clear distinction between the individual rights of states and the legal interests of other states. It stated that

> an essential distinction should be drawn between the obligations of a State towards the international community as a whole, and those arising vis-à-vis another State in the field of diplomatic protection. By their very nature the former are the concern of all States. In view of the importance of the rights involved, all States can be held to have a legal interest in their protection; they are obligations *erga omnes*.[67]

While the interpretation of the Court's judgment raises certain questions,[68] it is inappropriate to identify for all purposes responsibility with the subjective right of an injured state.[69] In the *South West Africa* cases, Ethiopia and Liberia were not themselves the beneficiaries of the right they sought to invoke. It was the subjective right of the people of South West Africa to have the territory administered on their behalf and in their interest which was at stake.[70] But this does not mean that Ethiopia and Liberia did not have what common lawyers call 'standing'.[71] What it does mean is that the legal relations between South Africa, the people of South West Africa and the claimant states (and generally the relations between states in the context of obligations of a collective or communitarian character) cannot be reduced to a bilateral form. It is necessary to distinguish between the primary beneficiary of an obligation (the right-holder directly affected by a breach of an international obligation) and those states with a legal interest in compliance with the obligation, irrespective of how or whether the breach has affected them, and which act in the broader public interest. According to the ARSIWA, it is only the former which are injured.[72] The distinction is both comprehensible and useful, whereas the portmanteau use of the term 'injury' confuses and obscures.

[66] Tams (2005), xiii.
[67] *Barcelona Traction, Light and Power Company, Limited*, ICJ Rep. 1970 p. 3, 32.
[68] See further Crawford (2000), 26–7. [69] See Crawford, (2001) 8 IJGLS 303, 319–21.
[70] Crawford, Third Report, 29–30. [71] See also Tams (2005), 196–7.
[72] See Chapter 11 for a discussion of how this is reflected in the ILC's rejection of Draft Articles, Art. 40 in favour of ARSIWA, Art. 42.

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15.4 Questions of causation

15.4.1 An expanded rubric

Article 31(1) provides that a state is only under an obligation to make full reparation for injury 'caused' by its internationally wrongful act. The commentary explains that the character of the causal connection required is expressed at this general level on the ground that '[v]arious terms are used to describe the link which must exist between the wrongful act and the injury in order for the obligation of reparation to arise . . . [T]he requirement of a causal link is not necessarily the same in relation to every breach of an international obligation.'[73] The inquiry into whether injury is 'caused' by a wrongful act is not limited to an inquiry into factual causality, which is a necessary but not sufficient condition for reparation. The allocation of injury to a wrongful act is in principle a legal process. The inquiry therefore also includes consideration of whether injury is too 'remote' (or excluded based on criteria variously expressed in terms of lack of 'directness', 'foreseeability' or 'proximity').[74]

The ARSIWA have been criticized for not addressing the requirement of causation in more detail. For example, Stern states:

> [T]he most that can be said is that the ILC is particularly silent on causation. The only assertion is that the injury can only be repaired if it is 'caused by the internationally wrongful act'. Nothing more. It is therefore left to States and judges to give some content to the causal link which is necessary for international responsibility to arise.[75]

The ILC justified the fact that the issue of causal link has not been dealt with by saying that '[t]he need for a causal link was usually stated in primary rules'. Nevertheless, it is clear that this is not the case and that, even if in certain cases the primary rule gives rise to some causal link problems, it cannot be the same causation as the one which arises when the primary

[73] ARSIWA Commentary, Art. 31, §10.

[74] Ibid. For example, the UNCC held Iraq responsible for 'direct' loss: SC Res. 687 (1991), §16; the tribunal in the *Trail Smelter Case* held certain damage to be 'too indirect, remote, and uncertain': *Trail Smelter Case (United States/Canada)*, (1938 and 1941) 3 RIAA 1905, 1931; the US–Germany Mixed Claims Commission considered whether damage was a 'loss attributable to Germany's act as a proximate cause': Administrative Decision No. 2 (1923) 7 RIAA 23, 30. See further the cases cited in the footnotes to ARSIWA Commentary, Art. 31, §10. For a comparative account see Hart and Honoré, *Causation in the Law* (2nd edn, 1985).

[75] Despite the reference 'to the causal link which is necessary for international responsibility to arise', Stern is discussing the causal link which is necessary between an internationally wrongful act and harm or damage.

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rule is breached. It is regrettable that the ILC did not clarify the difficult issues relating to the causal link.[76]

Although the Drafting Committee did state that '[t]he need for a causal link was usually stated in primary rules', the reason the requirement of causation was not elaborated in more detail was because it is not possible to devise more specific criteria that are applicable across the wide range of primary obligations. As the Drafting Committee stated in the sentence immediately before the one quoted by Stern,

> The Drafting Committee had considered a number of suggestions for qualifying that causal link, but, in the end, it had taken the view that, since the requirements of a causal link were not necessarily the same in relation to every breach of an international obligation, it would not be prudent or even accurate to use a qualifier.[77]

This is undeniably correct. Shelton recognizes that '[c]ausation is a complex issue in every legal system, where the extent of liability for remote events and the consequences of intervening causes may vary considerably from one area of the law to another'.[78] She adds that:

> A general statement of obligation to make reparation for harm caused masks many difficult legal issues that probably could not be adequately answered by a single set of articles, because the principles are intended to apply to every breach of an international obligation regardless of the source of the obligation or nature of the breach.[79]

The Eritrea–Ethiopia Claims Commission sought to articulate a more specific causation requirement. It concluded:

> [T]he Commission concludes that the necessary connection is best characterized through the commonly used nomenclature of 'proximate cause.' In assessing whether this test is met, and whether the chain of causation is sufficiently close in a particular situation, the Commission will give weight to whether particular damage reasonably should have been foreseeable to an actor committing the international delict in question. The element of foreseeability, although not without its own difficulties, provides some discipline and predictability in assessing proximity. Accordingly, it will be given considerable weight in assessing whether particular damages are compensable.[80]

[76] Stern (2010) 563, 569–70.
[77] ILC Ybk 2000(1), 388. See also Crawford, Third Report, 19; ARSIWA Commentary, Art. 31, §10.
[78] Shelton, (2002) 96 AJIL 833, 846. [79] Ibid., 833 n. 2.
[80] *Decision Number 7: Guidance Regarding* Jus ad Bellum *Liability*, (2007) 26 RIAA 10, 15.

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Although containing an additional adjective, the Claims Commission's formulation of the causation requirement does not add anything beyond the meaning of 'caused' elaborated by the ILC in the commentary. The generic character of the Claims Commission's chosen formulation is indicated by the fact that it was able to apply it in relation to all the various violations of international law it had to consider. It seems that the Claims Commission itself attached relatively little importance to its chosen formulation. It acknowledged that 'in many situations, the choice of verbal formula to describe the necessary degree of connection will result in no difference in outcomes',[81] and this is as true of 'proximate cause' as it is of other phrases.

15.4.2 Mitigation of damage and reparation

An integral aspect of causality is the question of mitigation of damage.[82] The commentary explains that '[a]lthough often expressed in terms of a "duty to mitigate", this is not a legal obligation which itself gives rise to responsibility'.[83] It was for this reason that a provision on the issue of mitigation of damage was not included in the ARSIWA, although the issue is addressed in the commentary.[84] The commentary states that 'a failure to mitigate by the injured party may preclude recovery to that extent'.[85] In other words, damage which occurs due to an injured state's failure to act reasonably to mitigate its loss is not 'caused' by the responsible state's wrongful conduct. This is true even for a wholly innocent victim of wrongful conduct.[86] As is stated by the International Court in the *Gabčíkovo-Nagymaros* case,

> Slovakia ... stated that 'It is a general principle of international law that a party injured by the non-performance of another contract party must seek to mitigate the damage he has sustained.'
>
> It would follow from such a principle that an injured State which has failed to take the necessary measures to limit the damage sustained would not be entitled to claim compensation for that damage which could have been avoided. While this principle might thus provide a basis for the calculation of damages, it could not, on the other hand, justify an otherwise wrongful act.[87]

[81] Ibid., 15 (para. 14). [82] Wittich, 'Compensation', (2008) MPEPIL, §20.
[83] ARSIWA Commentary, Art. 31, §11.
[84] ILC Ybk 2000/I, 392 (Chairman of the Drafting Committee).
[85] ARSIWA Commentary, Art. 31, §11. [86] Ibid.
[87] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, ICJ Rep. 1997 p. 7, 55. See also the *Naulilaa* case, in which Portugal's failure to quell an uprising caused by Germany was taken into consideration in determining the extent of the damage in respect of which compensation was due: *Responsabilité de l'Allemagne en raison des actes commis*

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The point is that the wrongfulness of conduct is not precluded merely because it is taken for the purpose of mitigating damage. But the Court can be seen to have accepted that the failure of an injured party to mitigate damage may preclude recovery to that extent.[88]

The principle has since been recognized by the Eritrea–Ethiopia Claims Commission. Ethiopia alleged that Eritrea failed to mitigate the damage it suffered as it expended money on a temporary hospital, rather than building a new one from the outset.[89] The Claims Commission rejected this argument on the facts, stating that 'the Commission cannot fault Eritrea for spending ERN 2 million to provide health services urgently needed by a large community'.[90]

15.4.3 Concurrent causes

15.4.3.1 The applicable principles

The issue of concurrent causes was raised by Special Rapporteur Arangio-Ruiz. He proposed a provision which read: 'Whenever the damage in question is partly due to causes other than the internationally wrongful act ... the compensation shall be reduced accordingly.'[91] This position was rejected by the Drafting Committee, which stated that 'the wrongdoing State should be liable for all the harm caused, irrespective of the role which external causes might have played in aggravating the harm. In its opinion, that type of situation did not call for a specific provision ... and should simply be covered in the commentary'.[92] Despite this, the Draft Articles Commentary later adopted stated:

> Innumerable elements, of which actions of third parties and economic, political and natural factors are just a few, may contribute to a damage as concomitant causes. In such cases ... to hold the author State liable for full compensation would be neither equitable nor in conformity with a proper application of the causal link criterion. The solution should be the payment of damages in proportion to the amount of injury presumably to be attributed to the wrongful act and its effects ...[93]

postérieurement au 31 juillet 1914 et avant que le Portugal ne participât à la guerre (Portugal contre Allemagne), (1930) 2 RIAA 1035, 1076.

[88] Higgins (2010), 540. [89] *Final Award: Eritrea's Damages Claims*, (2009) 26 RIAA 505, 554.

[90] Ibid., 555. [91] Arangio-Ruiz, Second Report, ILC Ybk 1989/II(1), 56.

[92] ILC Ybk 1992/I, 217 (Chairman of the Drafting Committee). As discussed below, the Drafting Committee did not reject the relevance of the contributory negligence of the injured state: ibid., 217 (Chairman of the Drafting Committee).

[93] Draft Articles Commentary, Art. 44, §13.

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The ARSIWA now clearly take the position advocated by the Drafting Committee. The commentary states that '[a]lthough, in such cases, the injury in question was effectively caused by a combination of factors, only one of which is to be ascribed to the responsible State, international practice and the decisions of international tribunals do not support the reduction or attenuation of reparation for concurrent causes'.[94]

The position taken in the ARSIWA is borne out by the case law,[95] for example the *Corfu Channel* case. That case concerned Albania's failure to warn the United Kingdom of the presence of mines in Albania's territorial waters, which resulted in damage to the United Kingdom's ships. Notwithstanding the fact that the mines had been laid by a third state, the United Kingdom was able to recover the full amount of its claim from Albania.[96] Similarly, when laying down the general principles to govern the recovery of compensation before the UN Compensation Commission, the Governing Council stated that '[w]here, for example, the full extent of the loss, damage or injury arose as a direct result of Iraq's unlawful invasion and occupation of Kuwait, it should be compensated notwithstanding the fact that it may also be attributable to the trade embargo and related measures.'[97] The position taken in the ARSIWA is consistent with the way the issue of concurrent causes is addressed in national legal systems.[98]

The commentary states that the same 'result should follow *a fortiori* in cases where the concurrent cause is not the act of another State (which might be held separately responsible) but of private individuals, or some natural event such as a flood'.[99] The *Tehran Hostages* case provides an example of the former situation. The International Court held that while the continued occupation of the embassy was attributable to Iran,[100] and Iran was responsible for failing to protect the embassy and its personnel,[101] the students' initial seizure of the premises was not attributable to Iran.[102] But there was no reduction in the reparation due from Iran in the light of the acts of the private individuals. The Court held that 'Iran is under an obligation to make reparation to the Government of the United States of America for the injury caused to the latter by the events of 4 November 1979 and what followed from these events.'[103]

[94] ARSIWA Commentary, Art. 31, §12. [95] Crawford, Third Report, 19.
[96] *Corfu Channel*, ICJ Rep. 1949 p. 4, 23.
[97] UNCC Governing Council, Decision No. 9, 6 March 1992, UN Doc. S/AC.26/1992/9, §6.
[98] Crawford, Third Report, 20. [99] ARSIWA Commentary, Art. 31, §12.
[100] *United States Diplomatic and Consular Staff in Tehran*, ICJ Rep. 1980, p. 3, 35.
[101] Ibid., 32–3. [102] Ibid., 30. [103] Ibid., 45.

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Consideration of a concurrent cause in the form of a natural event can be found in the jurisprudence of the Eritrea–Ethiopia Claims Commission. In relation to Ethiopia's claims concerning internally displaced persons, the Claims Commission held:

> A further complication is that some areas in Tigray were plagued at relevant times both by war and by drought, and both afflictions caused displacement. The evidence did not distinguish between persons who left their homes on account of the war, and those who left for other reasons. However, it was clear that the war was by far the most significant cause of internal displacement, and the Commission has not taken drought into account in seeking to assess the numbers of persons displaced on account of the *jus ad bellum* violation.[104]

This statement is narrower than the position taken by the International Court in the *Corfu Channel* case in that the Claims Commission relied on the fact that the war was not just a cause but the more significant cause of displacement.

There is an exception to the general rule concerning concurrent causes: where an 'identifiable element of injury can properly be allocated to one of several concurrently operating causes alone'.[105] The inability to allocate identifiable elements of injury to particular causes is evident in the examples already mentioned: in the *Corfu Channel* case, the conduct of both Albania and the third state contributed to the same damage, the damage to the United Kingdom's ships; in the *Tehran Hostages* case the simultaneous seizure of the embassy by the private individuals and Iran's failure to protect the embassy contributed to the United States' loss; in the situation considered by the Eritrea–Ethiopia Claims Commission, the individuals in question left their homes due to the effects of both war and drought. But in relation to another claim, the Commission stated:

> Ethiopia occupied Tserona Town for nearly nine of the twelve months between May 31, 2000 and June 2001 when the damage was assessed … Ethiopia is not liable for damages to the town caused by combat or for looting and stripping of buildings that occurred either before or after its occupation of the town …
>
> Assessing relative responsibility for the looting and stripping of the town is difficult, not least because some damage resulted from combat operations and its population was absent during the relevant period, including two or three months after Ethiopian forces withdrew. Given this, and considering the evidence as a

[104] *Final Award: Ethiopia's Damages Claims*, (2009) 26 RIAA 631, 733.
[105] ARSIWA Commentary, Art. 31, §13. See also the *Zafiro* case: *Earnshaw* v. *US*, (1925) 6 RIAA 160, 164–5.

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whole, the Commission finds that Ethiopia is liable for seventy-five percent of the damage caused by looting and stripping in Tserona Town.[106]

Here, Ethiopia's conduct and the conduct of private individuals were temporally distinct and caused separate damage.

It is important to note that the issue of concurrent causes is distinct from the issue of a plurality of responsible states (i.e. cases where more than one state is responsible for the same internationally wrongful act), an issue addressed in Article 47.[107]

15.4.3.2 Hard cases

The International Court was confronted with the problem of concurrent causes in the *Bosnian Genocide* case. After finding that Serbia breached its obligation to prevent genocide, the Court stated:

> [The] question is whether there is a sufficiently direct and certain causal nexus between the wrongful act, the Respondent's breach of the obligation to prevent genocide, and the injury suffered by the Applicant, consisting of all damage of any type, material or moral, caused by the acts of genocide. Such a nexus could be considered established only if the Court were able to conclude from the case as a whole and with a sufficient degree of certainty that the genocide at Srebrenica would in fact have been averted if the Respondent had acted in compliance with its legal obligations. However, the Court clearly cannot do so. As noted above, the Respondent did have significant means of influencing the Bosnian Serb military and political authorities which it could, and therefore should, have employed in an attempt to prevent the atrocities, but it has not been shown that, in the specific context of these events, those means would have sufficed to achieve the result which the Respondent should have sought.[108]

The decision highlights the distinction between causation in the context of a primary obligation and in the context of damages. Before making its finding on causation, the Court stated:

> To make [the finding that Serbia failed to comply with its obligation to prevent genocide], the Court did not have to decide whether the acts of genocide committed at Srebrenica would have occurred anyway even if the Respondent had done as it should have and employed the means available to it. This is because ... the obligation to prevent genocide places a State under a duty to act which is not

[106] *Partial Award: Central Front: Eritrea's Claims 2, 4, 6, 7, 8 & 22*, (2004) 26 RIAA 115, 138–9, 139. Also referred to in *Final Award: Eritrea's Damages Claims*, (2009) 26 RIAA 505, 544.

[107] For a discussion of situations involving a plurality of responsible states as a matter of substance, see Chapter 10. On issues of procedure, see Chapter 20.

[108] *Bosnian Genocide*, ICJ Rep. 2007 p. 43, 234.

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dependent on the certainty that the action to be taken will succeed in preventing the commission of acts of genocide, or even on the likelihood of that outcome . . .

The Court cannot however leave it at that. Since it now has to rule on the claim for reparation . . . the question just mentioned, whether the genocide at Srebrenica would have taken place even if the Respondent had attempted to prevent it by employing all means in its possession, becomes directly relevant, for the definition of the extent of the obligation of reparation borne by the Respondent as a result of its wrongful conduct.[109]

While it is correct that the tests of causation applicable to establish a breach of a primary obligation and to establish the damage for which reparation is due are distinct, the Court's approach to the latter test has been criticized. The test the Court adopted was a 'but for' test: it asked would the genocide have occurred 'but for' Serbia's failure to fulfil its obligation, and answered in the negative. That a wrongful act must be a *conditio sine qua non* for the occurrence of damage is said to be 'undisputed'.[110] However, in many situations, damage resulting from an internationally wrongful act will be caused by the combined action of several actors or factors. In such circumstances, often no one contribution can be said to be indispensible such that the international wrong would not have occurred 'but for' it.[111] As Gattini states, 'To say that the genocide would have been committed anyway is not equivalent to saying that the genocide would have been committed with the same modalities . . . [T]he fact that Serbia's omission was not the *only* cause does not mean that it was *no* cause at all.'[112] Dissatisfaction with the 'but for' test in domestic law is also well known.[113]

On the other hand, given the general principle that reparation is not to be reduced in cases of concurrent causes, the Court might have found it difficult to hold Serbia to have 'caused' the genocide, with the consequence that it would have been under an obligation to provide reparation in relation to the entirety of the damage. The Court took the middle ground by making a declaration by way of satisfaction.

It has been suggested that the making of that declaration created an inconsistency: while the Court held that no compensation was due as no damage had been caused by Serbia's wrongful omission, the conclusion that satisfaction should be given is predicated on damage *having* been caused.[114] According to this view Serbia's conduct cannot have been

[109] *Bosnian Genocide*, ICJ Rep. 2007 p. 43, 233–4. [110] Wittich (2008), §17.
[111] See McCarthy, *Reparations and Victim Support in the International Criminal Court* (2012), 138.
[112] Gattini, (2007) 18 EJIL 695, 710. [113] See, e.g., Hart and Honoré (1985), 122–8.
[114] Milanović, (2007) 18 EJIL 669, 690.

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causally connected to the moral damage arising from the genocide but not to the material damage arising from the very same event. But Serbian responsibility was for failure to prevent, and this failure could be connected to the genocide without having been directly or sufficiently causative of it.

15.4.4 Contribution to the injury

The issue of contribution concerns situations dealt with in national systems under such rubrics as 'contributory negligence', 'comparative fault' and 'faute de la victime'.[115] Throughout the twentieth century, different views were expressed as to the consequences that flowed where an injured state contributed to its injury: some considered that it constituted a circumstance precluding wrongfulness, others that it merely affected the assessment of damage for which reparation was due.[116] The latter view is taken in the ARSIWA,[117] with Article 39 providing that '[i]n the determination of reparation, account shall be taken of the contribution to the injury by wilful or negligent action or omission of the injured State or any person or entity in relation to whom reparation is sought.'

The ARSIWA have been criticized for recognizing that there is a reduction of reparation in cases of contribution, but not in cases of concurrent causes. It has been said:

> It is not clear why only the contribution to the injury of the injured State or any person in relation to whom reparation is sought is taken into account. In order to examine the causal link properly, it would have been necessary to take into account the possible contribution to the injury of all actions ... such as ... the action of a third party State which contributes to the final injury.[118]

But the reason why reparation is reduced in cases of contribution has nothing to do with concurrent causation: it has to do with equity and fairness as between the responsible state and the injured state.[119]

[115] ARSIWA Commentary, Art. 39, §1.
[116] See Moutier-Lopet (2010), 639–40. Special Rapporteur García Amador had suggested that an 'act or omission shall not be imputable to the State if it was provoked by some fault on the part of the injured alien himself': García Amador, Sixth Report, ILC Ybk 1961/II, 48.
[117] See also ILC Ybk 2000/I, 392 (Chairman of the Drafting Committee); ILC Ybk 2000/II(2), 42–3.
[118] Stern (2010) 563, 570.
[119] ILC Ybk 2000/I, 183 (Crawford); ARSIWA Commentary, Art. 39, §2.

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The Article represents progressive development of the law, at least to the extent that it deals with contribution by states (as opposed to individuals on whose behalf a state might make a claim).[120] Nonetheless, it can be justified.

The principle of contribution to injury and that of mitigation of damages are closely related and a clear distinction between them is at times hard to make.[121] Both concern situations in which an injured state suffers greater damage due to its own act or omission. The difference is that mitigation of damage concerns conduct after damage has occurred, whereas contribution concerns conduct which occurs at the time of the breach or the original infliction of damage.[122] For example, in *LaGrand*, the International Court considered Germany's delay in commencing proceedings as having contributed to the injury it suffered due to the United States' breach of the provisional measures order. It did not consider Germany's delay in the context of the United States' breaches of Article 36 of the Vienna Convention on Consular Relations[123] as contributing to the damage flowing from those injuries (a failure to mitigate damage).[124]

Article 39 states that a contribution to injury is only relevant if it is 'wilful or negligent'. The expression 'wilful or negligent action or omission' was taken from the Convention on the International Liability for Damage caused by Space Objects.[125] Special Rapporteur Arangio-Ruiz had originally used the phrase 'contributory negligence',[126] but it was necessary to move away from an expression borrowed from the common law.[127] While there is no requirement in Article 39 that negligence be 'gross' or 'serious', the effect that any negligence has on the determination of reparation will depend on the degree to which it contributed to the injury and the circumstances of the case.[128] Article 39 has been criticized for being limited to 'wilful or negligent' conduct. It has been

[120] Crawford, Third Report, ILC Ybk 2000/II(1), 61. [121] Wittich (2008), §40.
[122] Ibid. [123] 24 April 1963, 596 UNTS 261.
[124] *LaGrand (Germany* v. *US)*, ICJ Rep. 2001 p. 466, 486–7, 508.
[125] 29 March 1972, 961 UNTS 187; ILC Ybk 1992/I, 217.
[126] Arangio-Ruiz, Second Report, ILC Ybk 1989/II(1), 56.
[127] ILC Ybk 1992/I, 217 (Chairman of the Drafting Committee). The common law expression was considered inappropriate in that it 'lent itself to a restrictive interpretation excluding deliberate acts or omissions': ibid., 217.
[128] ARSIWA Commentary, Art. 39, §5. Where damage is entirely attributable to the conduct of an injured state and not at all to the conduct of a responsible state, the better interpretation is that the damage is not 'caused' by the conduct of the responsible state as required by Art. 31: ibid., §5 n. 660.

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said that the 'idea of fault is introduced here, even though it has no role in the theory of international responsibility, to determine the quantum of damages'.[129] Such comments misrepresent the ARSIWA's approach to fault. The position taken is that there is no requirement of fault *beyond* that required by the relevant primary rule. It is not the case that fault has no role in the theory of international responsibility. For example, state 'intention' may be relevant to the justifications and excuses contained within Articles 20 to 25.[130]

Although Special Rapporteur Arangio-Ruiz originally suggested that the relevance of contribution be limited to the context of compensation,[131] the Drafting Committee considered that the issue could arise equally in relation to other forms of reparation, so Article 39 was made of general application.[132] It is true that the case law largely concerns contribution in relation to compensation, but situations can easily be envisaged in which contribution could arise in the context of restitution. For example, if a state-owned ship were unlawfully detained by another state and, while under detention, sustained damage due solely to the negligence of the captain, the responsible state would be required merely to return the ship in its damaged condition.[133]

As Article 39 states, it is not only contribution by an injured state that is relevant, but also contribution by 'any person or entity in relation to whom reparation is sought'. This refers not only to situations in which a diplomatic protection claim is brought but 'also any other situation in which one State invokes the responsibility of another State in relation to conduct primarily affecting some third party'.[134] In *Diallo*, the ICJ took into account the possible role played by Diallo himself in the injury that he suffered. Among other things, Guinea sought compensation for the loss of the personal property located in Diallo's apartment following his expulsion from the Democratic Republic of the Congo. The Court stated:

> There is, however, uncertainty about what happened to the property listed on the inventory. Guinea does not point to any evidence that Mr. Diallo attempted to transport or to dispose of the property in the apartment, and there is no evidence before the Court that the DRC barred him from doing so. The DRC states that it did not take possession of the apartment and that it did not evict Mr. Diallo from the apartment. Mr. Diallo himself stated in 2008 that the company from which

[129] Stern (2010) 563, 570. [130] See further Chapters 2 and 9.
[131] Arangio-Ruiz, Second Report, ILC Ybk 1989/II(1), 56.
[132] ILC Ybk 1992/I, 217 (Chairman of the Drafting Committee); ARSIWA Commentary, Art. 39, §4.
[133] ARSIWA Commentary, Art. 39, §4. [134] ARSIWA Commentary, Art. 39, §6.

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the apartment was leased took possession of it soon after his expulsion and that, as a result, he had lost all of his personal effects. Therefore, taken as a whole, Guinea has failed to prove the extent of the loss of Mr. Diallo's personal property listed on the inventory and the extent to which any such loss was caused by the DRC's unlawful conduct.[135]

The Court here clearly recognized the relevance of Diallo's own conduct in relation to the loss he allegedly suffered. But this is best seen as a situation in which the loss in question was entirely due to the conduct of the victim or a third party, a situation captured by the causation requirement in Article 31(1).[136]

15.5 Plurality of injured states

The Draft Articles did not address situations in which the breach of an international obligation involves multiple responsible states or multiple injured states.[137] Clearly, more than one state may be injured by the breach of an international obligation. This situation is now dealt with in Article 46, which states, 'Where several States are injured by the same internationally wrongful act, each injured State may separately invoke the responsibility of the State which has committed the internationally wrongful act.' An example of a case in which multiple states each invoked the responsibility of a responsible state is the *Nuclear Test* cases. In those cases, Australia and New Zealand alleged that France, *inter alia*, had violated the right of all states to be free from atmospheric nuclear weapons testing.[138]

Not only is it possible for responsibility to be invoked by multiple injured states, responsibility could also be invoked by an injured state and by one or more states 'other than an injured State'.[139] As a 'State other than an injured State' can only seek reparation in the interest of the injured state,[140] issues concerning the apportionment of reparation can only arise in situations in which responsibility is invoked by multiple injured states.

[135] *Ahmadou Sadio Diallo (Guinea* v. *DRC)*, ICJ, Compensation, 19 June 2012, §31.
[136] ARSIWA Commentary, Art. 39, §5 n. 660; Crawford, Third Report, 62.
[137] Crawford, Third Report, 72.
[138] *Nuclear Tests (New Zealand* v. *France)*, ICJ Rep. 1974 p. 457; *Nuclear Tests (Australia* v. *France)*, ICJ Rep. 1974 p. 253. See also *SS Wimbledon*, (1923) PCIJ Ser. A No. 1; *Aerial Incident of 27 July 1955 (Israel* v. *Bulgaria)*, Preliminary Objections, ICJ Rep. 1959 p. 127; *Aerial Incident of 27 July 1955 (UK* v. *Bulgaria)*, ICJ Rep. 1959 p. 264; *Aerial Incident of 27 July 1955 (US* v. *Bulgaria)*, ICJ Rep. 1960, p. 146.
[139] See Chapter 19. [140] ARSIWA, Art. 48(2)(b).

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While each injured state may invoke the responsibility of the responsible state, each can only recover reparation for the damage that it itself has suffered. In the *Nuclear Test* cases, for example, New Zealand 'reserve[d] the right to hold the French Government responsible for any damage or losses incurred *by New Zealand or the Pacific Islands for which New Zealand has a responsibility*'.[141] The primary concern is situations in which there is payment of compensation to multiple injured states. The commentary specifically states that '[w]here there is more than one injured State claiming compensation on its own account or on account of its nationals, evidently each State will be limited to the damage actually suffered.'[142]

The flip side of the coin is that a responsible state cannot be required to provide compensation to various injured states which in total exceeds the damage caused. This follows from the basic principle of full reparation: a responsible state is only required to provide reparation for injury caused by its wrongful act. Although the Court in *Aerial Incident of 27 July 1955* ultimately held that it did not have jurisdiction over Israel's claim, in oral argument the agent for Israel acknowledged that 'the Bulgarian Government is entitled to protection against having to pay double damages', in the light of the claims also brought by the United Kingdom and the United States.[143] As this example indicates, where there are multiple injured states issues can arise concerning the co-ordination of their claims.[144]

Article 46 is concerned with situations in which multiple states are injured by the '*same* internationally wrongful act'.[145] As defined in Article 2, an internationally wrongful act involves '*a* breach of *an* international obligation of the State'.[146] That is, Article 46 is only concerned with situations in which multiple states are injured by the breach of one international obligation, necessarily an obligation owed to a group of states collectively or to the international community as a whole

[141] *Nuclear Tests (New Zealand* v. *France)*, Memorial on Jurisdiction and Admissibility, Annex XIII (emphasis added).

[142] ARSIWA Commentary, Art. 46, §4.

[143] *Aerial Incident of 27 July 1955 (Israel* v. *Bulgaria)*, Preliminary Objections, Oral Hearings, 26 March 1959, 534 (Rosenne). It also stated in its memorial that '[o]ne of the primary reasons for establishing co-ordination [with the US and UK] from the earliest stages was to prevent, so far as was possible, the Bulgarian Government being faced with double claims leading to the possibility of double damages. It is a well-known rule of law that the defendant State cannot be asked or compelled to pay reparation due in respect of damage twice over': *Aerial Incident 27 July 1955 (Israel* v. *Bulgaria)*, Memorial of Israel, §103. On the rule against double recovery, see further Chapter 20.

[144] On the issue of election in the context of multiple injured states, see Chapter 17.

[145] ARSIWA, Art. 46 (emphasis added). [146] ARSIWA, Art. 2(b) (emphasis added).

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(obligations *erga omnes* and *erga omnes partes*).[147] In situations in which one act breaches multiple bilateral obligations, there is more than one internationally wrongful act. The limited scope of Article 46 is explicable on the basis that it is only in relation to the situations dealt with that it is necessary to specify that each injured state has the right to invoke responsibility. Nonetheless, the principles discussed in the commentary concerning the division of reparation are equally applicable in situations where responsibility is invoked by multiple states injured by conduct breaching multiple bilateral obligations, being based as they are on the principle of full reparation.

[147] See also Huesa Vinaixa, in Crawford, Pellet and Olleson (2010) 949, 949–50. See ARSIWA, Art. 48(1) regarding obligations *erga omnes* and *erga omnes partes*.

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J. Law & E. A. Martin, "sic utere tuo ut alienum non laedas", in A DICTIONARY OF LAW, eds. Elizabeth A. Martin & Jonathan Law (Oxford University Press, 2006), pages 464-465

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not qualify for *statutory sick pay. It was replaced by *incapacity benefit in April 1995.

sic utere tuo* ut *alienum non laedas [Latin] Use your own property in such a way that you do not injure other people's: a maxim often used in cases of nuisance. It is misleading, since only an unreasonable interference with a neighbour's property is actionable as a nuisance.

signature of treaty The formal and official affixing of names to the text of a *treaty by the representatives of the negotiating states. either as a means of expressing the definitive consent of the state to be bound by the terms of the treaty or as an expression of provisional consent subject to *ratification. acceptance. or approval.

signature of will *See* EXECUTION OF WILL.

silence *n.* *See* RIGHT OF SILENCE.

silk *n.* *See* QUEEN'S COUNSEL.

similar-fact evidence Evidence that a party, especially the accused, has on previous occasions misconducted himself in a way similar to the misconduct being alleged against him in the proceedings before the court. The evidence frequently takes the form of a *previous conviction. In general, the prosecution may not offer similar-fact evidence as part of its case unless it can be shown to be relevant to an issue before the jury, for example by rebutting some defence advanced by the accused. Thus. if a person charged with fraud contends that he was honestly mistaken, the fact that he has committed similar frauds on previous occasions may be admissible. The judge may in his discretion exclude otherwise admissible similar-fact evidence under section 78 of the Police and Criminal Evidence Act 1984 if he considers that it would have an adverse effect on the fairness of the proceedings.

simple contract (parol contract) Any *contract other than one made by *deed.

simple trust *See* BARE TRUST.

sine die [Latin] Without a date. To adjourn a case *sine die* is to adjourn it without setting a date for a future hearing.

single administrative document (SAD) A single document declaring an import into an EU state. This is an improvement on the system it replaced. in which many documents were required before a product could be imported into the ED.

Single European Act The legislation passed in 1986 in the European Community (in force from 1 July 1987) that committed all member states to an integrated method of trading with no frontiers between countries by 31 December 1992. It was the first Act to amend the principles of the Treaty of Rome. In practice, some of its terms on harmonization. such as the insurance market, have taken considerably longer to implement. The main creation of the Single European Act is the *Single Market for trading in goods and services within the ED.

Single Market The concept that underlies trading in the European Union. as codified in the *Single European Act 1986. The Single Market came into force on 1 January 1993 with between 90% and 95% of the necessary legislation enacted by all member countries. The measures covered by the legislation include: the elimination of frontier controls (the full measures have been repeatedly delayed); the acceptance throughout the market of professional qualifications; the acceptance

of national standards for product harmonization; open tendering for public supply contracts; the free movement of capital between states; a reduction of state aid for certain industries; and the harmonization of VAT and excise duties throughout the market.

single-member company *See* PRIVATE COMPANY.

single-union agreement A collective agreement within a company or establishment that recognizes only one *independent trade union for the purposes of *collective bargaining. The selection of the union to be recognized for this purpose is frequently now based on the so-called *beauty competition. This agreement does not restrict the rights of individual employees to belong to a union of their choice or not to belong to a union. However, their only access to collective bargaining is through the single union.

sittings *pl. n.* (in the *Supreme Court) The four periods of the legal year during which the full range of judicial business is transacted. The sittings are Michaelrnas, Hilary, Easter, and Trinity. Sittings were substituted for *terms by the Judicature Act 1873. *See also* VACATIONS.

slander *n.* A defamatory statement made by such means as spoken words or gestures. i.e. not in permanent form. Generally slander is only actionable on proof that its publication has caused special damage (actual financial or material loss), not merely loss of reputation. Proof of special damage is not necessary when the slander implies the commission of a criminal offence punishable by imprisonment, infection with a contagious disease, unchastity in a woman, or is calculated to disparage a person in his office, business, trade, or profession. *See* DEFAMATION.

slander of goods (disparagement of goods) A false statement. made maliciously, that disparages the quality of goods manufactured and sold by the claimant. It is a form of the tort of *malicious falsehood. In order to be actionable, the statement must allege some specific defect in the claimant's goods. A mere assertion by a rival trader that his goods are better is not sufficient, even if the claim was false and malicious.

slander of title A false statement, made maliciously. that impugns a vendor's title to sell property. It is a form of the tort of *malicious falsehood.

slavery *n.* The prohibition on slavery or forced labour as set out in Article 4 of the European Convention on Human Rights is now part of UK law as a consequence of the *Human Rights Act 1998. There are exceptions to this prohibition for prisoners. military service, normal civic obligations, and in emergencies.

slip rule The rule permitting the correction of clerical mistakes arising from any accidental slip or omission in judgments or orders. Such errors can be corrected at any time by the court on application without an appeal.

small agreement **1.** (under the Consumer Credit Act 1974) A regulated *consumer-credit agreement for credit not exceeding £50, other than a hire-purchase or conditional-sale agreement. or a regulated *consumer-hire agreement that does not require the hirer to make payments exceeding £50. In both cases the agreement is either unsecured or secured by a guarantee or indemnity only. Some small agreements are outside certain provisions of the Act. **2.** (under the Competition Act 1998) An agreement in which the parties are exempt from the imposition of penalties (fines) for anticompetitive practices. Section 39 of the Act provides the exemption, and the Competition Act 1998 (Small Agreements and

Annex 527

J. Lovelock, *Some thoughts on the year 2000: The future as seen half a century ago,* in THE COLOURS OF ENERGY: ESSAYS ON THE FUTURE OF ENERGY IN SOCIETY, eds. G. Kramer & B. Vermeer (Shell International BV, 2015)

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Edited by Gert Jan Kramer and Bram Vermeer at the initiative of Shell

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Some thoughts on the year 2000 The future as seen half a century ago

James Lovelock wrote this essay for Shell in 1966. He intended it as an alternative to the forecasts of Herman Kahn, at that time a pre-eminent futurist and well known for his dark scenarios of a total nuclear war. Lovelock believed that as we had avoided anthropocidal war, we could also avoid environmental disasters. Cities would become dense again, made liveable by new electronic media.



> *James Lovelock*

And the word of the Lord came unto me a second time, saying, What seest thou? And I said, I see a seething pot; and the face thereof is toward the north. Then the Lord said unto me, Out of the north an evil shall break forth upon all the inhabitants of the land.
Jeremiah 1:13-14

I have just read a version of the year 2000 according to Esso. It is a pleasant glossy publication enclosing a series of essays by Toynbee, Asa Briggs, Cockcroft, Buchanan and other distinguished persons. Their predictions were all founded upon the assumption that the current 5% compound interest rate of growth of wealth and energy use would proceed unchecked. Each contributor was prepared to consider the possibility of minor set-backs in the field of his own speciality; thus Cockcroft had doubts upon the early development of fusion power sources. But outside each of their own fields these specialists assumed that all would be well and that ‘progress’ was inevitable. The effect was to make the collection of essays unconvincing; rather like the predictions of the future of a child by his schoolmasters.

Details cannot be seen from 33 years away. Even the real prophets of our times, the science fiction writers, have blundered when attempting such a long sighted view. Thus H.G. Wells in the early 1900s forecast that aviation would never become a significant method of transport or communication. By contrast the general predictions of *Brave New World* and *1984* included much that has stood the test of time. Therefore, in thinking about the year 2000 we should limit ourselves to general trends rather than to considering whether or not we shall go from London to Brighton by foot or by fusion-powered hovercraft.

Even with general trends, this is of all times one of the most difficult for predicting the future. The reason for this can be seen from the trends of human population growth. As with any species, human population tends to constancy, except during major ecological changes. Our species

passed through at least two of these and is now in the middle of the third. The first was the development of organised hunting leading to a stable population at a density of 1 to 10 per square mile, such as with the North American Indians; then to an organised agriculture as in Western Europe until about 1700, with 50-100 per square mile; and finally the present techniculture at 1,000 per square mile and still rising.

During a period of ecological equilibrium the factors determining growth and decay are in balance and can be determined. Consequently the prediction of the future can be made with some confidence. For example, it would have been comparatively easy in 1267 to have predicted 1300. In our present state of rapid change the factors determining growth are partially understood but those determining decay can only be guessed for they have yet to exert their effects. In the end, of course, growth is limited by the rate at which raw materials and energy can be supplied. Nevertheless by 2000 even if the present growth rate persists there should still be adequate supplies of energy and raw materials. Whether or not the present 5% compound interest rate of growth can continue for a further 33 years depends upon the chance of a set-back by any one of a number of possible hazards, such as for example those listed in Table 1. Disasters from outside, either galactic or from the solar system are comparatively unlikely, as are internal upheavals of the earth. The most probable curbs come from the biosphere, including especially the human component.

The most probable of all curbs is the threat or even the event of an ecological disaster. Such a disaster could arise from any of a number of possible causes, but most probably through the accumulation of harmful waste products. That merely the threat of such an event is sufficient to slow growth is illustrated by the computation that by the year 2000 the USA alone will have spent $275 billion on the control of pollution. Such expenditure is competitive with that available for growth and indeed may raise new problems. The replacement of the energy obtained from combustion by some perfect and clean source of power would not lessen the risk of ecological disaster, indeed it might hasten the event through speeding the attainment of ecological imbalance.

CURBS ON HUMANITY		
Class	Curb	Probability
Physical external	Supernova near enough for radiation damage to life on the earth	« 0.0000003
	Destructive collision with a large meteorite	< 0.001
	Change in solar output	< 0.0001
Physical internal	Tectonic activity	< 0.0003
	Sea level rise	< 0.001
	Ice age	< 0.001
Biological	Destructive pandemic to man or food plants	< 0.1 to 0.01
Human ecological	Nuclear war	< 0.1
	Accidental or contrived pandemic	< 0.1
	Political or economic disaster	< 0.1
	Socially destructive inventions e.g. cars, a drug-like 'soma'	< 0.1
	Religious revival	< 0.01
	Major ecological or climatic disaster due to human activity	< 0.5

Table 1: The probability that one of the curbs listed might affect the growth of population and of energy consumption during the period from now to the year 2000.

The early growth of the industrial age was made possible by the development of means of preventing or removing pollution from the supplies of fresh water. The energy consumed in maintaining the supply of this commodity rises faster than does the total available supply of energy. Experience with fresh water suggests that the other components of our ecological cycle including the sea and the air will either become so polluted as to prevent further growth or consume so much of our total energy in the prevention of their pollution, as to slow the rate of growth. Already there are signs that air pollution has become a global problem and could develop catastrophically in as little as ten years. In the last few years it has been realised that the sea also is not an infinite sink for waste products, particularly where these are distributed as hydrocarbons at the air water interface where dilution can only take place in two dimensions.

These are the more obvious ecological curbs whose effects we now can foresee. If we combat them successfully and go on to the year 2000

and have available 10 times the power we have now it is almost certain that other ecological problems as yet unrecognised will be with us and exerting their own restraint to growth. It is more important also that a curb does not have to act to absorb energy. Its mere recognition is sufficient. This is as true of the writing of this note as it is of the expenditure on the avoidance of nuclear war.

Considerably before 2000 therefore it seems likely that the current pattern of growth will have changed. Either the total consumption of energy will have levelled off or if it does rise tenfold then the greater part of this increase will be spent in insurance against ecological disaster. I am sufficiently optimistic to believe that, just as we have avoided anthropocidal war, so we shall avoid these other disasters. The cost, however, will be high. On this basis I see the world in the year 2000 as follows.

Cities will become dense again and suburbs will go back to the plough

The personal use of energy in large quantities will be passing. In particular, the present grossly-inefficient domestic heating and cooling methods will no longer be possible, nor will high-powered personal transport. A drastic change in land and sea use may be under way with much less space for cities, roads and airports, etc., somewhat less for agriculture. But the establishment of large ‘park’ areas of undisturbed land in an attempt to restore the ecological status quo.

Cities will become dense again and suburbs go back to the plough. Passive heating and cooling will be used, as will public transport. A great deal of effort will go to making the cities bearable to live in.

The entertainment and education industries which use little power will be vastly developed. Full colour three-dimensional TV with excellent programmes will be ubiquitous as will bingo halls or their 2000 equivalent. Non-addicting euphoric drugs may be widely available. Communication by satellite will be so good that conferences by television may render

business travel comparatively unnecessary. Conservation will be the great political and religious issue of the day, surplus technical effort will go in this direction instead of to space and war as now. This sort of change of heart is unlikely unless there has been some quite chastening surprise. There is a good chance of an unpleasant surprise, such as a brush with an ice age, during the next decade or so.

Finally, how does this affect Shell? I think that Shell will be doing very well in the year 2000 even though petrol has long since vanished from public use. Although predominance of nuclear power will have greatly reduced the growth of energy supply from combustion it will still probably be greater than now. More important there will be a very large increase in the sales of products as materials and chemicals and even possibly food.

If I am right in my prediction that by 2000 a large proportion of the total energy turnover is going towards the avoidance of ecological disaster, then we can be sure that Shell will be in the business of counter-measures for profit. This might be its major activity. This is not the place for detailed comment, but, to illustrate my thought in this direction, there are the following possibilities:

1. The treatment of desert surfaces with ‘tars’ for climate control. The tar would change the radiation balance both directly and by laying dust;
2. The deliberate modification of the atmospheric composition through either controlled combustion or even the release into the atmosphere of a product specifically chosen to possess ideal ‘greenhouse’ properties.

To summarise. In the next 33 years we enter a phase where human activity becomes a significant portion of the total biological activity of the planet. Hitherto the climate of the earth and the chemical composition of the surface, air and sea have evolved with life to provide optimum conditions for its survival. Furthermore, this optimum was actively maintained by biological cybernetic processes. It is in Shell’s interest to participate in the maintenance of this optimum whatever may be the cause of a departure from it. It should be an interesting challenge and keep us alive.

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Parents behaving like teenagers
An intergenerational perspective on the energy challenge
> *Herman van der Meyden and Maaike Witteveen*

The second death of distance
Hidden drivers of mobility and energy
> *Tali Trigg*

James Lovelock is a British scientist and environmentalist. He has a been a prominent voice in the climate change debate. In 1957, Lovelock invented the electron capture detector, which allowed for the discovery of the presence of CFCs and their role in stratospheric ozone depletion. He is best known for proposing the Gaia hypothesis, which postulates that the biosphere is a self-regulating entity with the capacity to keep our planet healthy by controlling the chemical and physical environment. His latest book is *A rough ride to the future*, published by Penguin (2014).

Living in overshoot
A forecast and the desire to have it wrong

Back in the 1970s, when Jorgen Randers co-authored *The limits to growth*, it would have been possible for humanity to continue its way of life indefinitely. This is no longer so. Humanity now lives far beyond its means. Humanity's failure to make the right decision has made Randers sceptical about the odds of democratic forces saving the world from the global shocks he foresees from overshooting the planetary limits.



> *Jorgen Randers*

When we wrote *The limits to growth* back in 1972, it was an optimistic time. Human belief in the power of technology was at an all-time high. There seemed to be no challenge that could not be overcome by human ingenuity and growth based on continuing technological advances. In this perspective, the main message of our book was seen by most as unacceptable, as it showed the constraints of development. Man was no longer omnipotent.

Yet the message of *The limits to growth* was actually optimistic. Although it showed that humanity could overshoot planetary limits, it presented a number of scenarios that could steer us away from that fate, before the human ecological footprint grew into unsustainable territory.

Our message was that growth would come to an end, but we didn't mean economic growth. What we really meant was that the human ecological footprint couldn't grow forever. We left the possibility open that economic value would grow indefinitely, as long as its physical impacts remained limited. At the time, we found it almost inconceivable that humanity would allow itself to grow beyond sustainable planetary limits.

Today we know better. Since the publication of *The limits to growth*, the human ecological footprint has doubled, and is now at least a third larger than the sustainable carrying capacity of the globe. The global policies that would have kept society within its planetary boundaries, had they been put in place in the 1970s, do not suffice when implemented now. There are now only two options: 'managed decline' towards a footprint that fits the earth, or 'uncontrolled collapse' induced by nature or by the market.

The message of *The limits to growth* has stood the test of time, although we would word things differently today. Back in 1972 we spoke of 'limits', 'physical growth' and 'equilibrium'; today these concepts have become accepted as 'planetary boundaries', 'change in ecological footprint', and 'sustainability'.

But even if the concepts are better accepted, the human footprint continues to grow, which makes me worry what will happen to my children and grandchildren. Some years ago I decided to try to describe what would

actually happen over the next 40 years. Not what I would like to happen, but what the most likely course of events would be. So we could prepare, and hopefully also find out what could be done to improve on that future.

The IPAT formula

The human environmental footprint is a matter of population size, affluence and technology, as was pointed out a few years before *The limits to growth*. This was summarised in the 'IPAT equation': Impact equals Population multiplied by Affluence multiplied by Technology (I = P x A x T).

Back in the 1970s, population ('P' in the equation) was growing exponentially, but the growth rate later slowed down. My best guess is that world population will peak at 8 billion around 2040. The 1970 global average of 4.5 children per woman is already down to 2.5 children, and will decrease further to 1.5 in 2050. This is close to the United Nations' Low Scenario. Many higher estimates have been made, but these often underestimate the effects of growing urbanisation. While a child in a rural setting is an extra pair of hands, in the city it is one more mouth to feed. Parents in the slums of megacities understand extremely well that the costs of having children are high, and that it is more rational to have only one or two children and make sure that those get out of the slum. It is also often assumed that fertility in the West will increase. Yet I don't think many countries will be able to pour the amounts of money necessary into all the kindergartens necessary in order to convince rich-world women to have more children. Most modern women prefer having a job over having more children.

There are other reasons why fertility will decrease further. The education levels of young women will continue to rise. Maternal health has improved dramatically, leading to a decrease in child mortality; the increased likelihood of children surviving means that it is no longer necessary to have many children in the hopes of seeing some live. And contraception is increasingly available.

So population will reach a peak, not because of planetary constraints but because of deliberate human choice.

Productivity

The second factor in the IPAT equation, ‘affluence’, is in fact GDP per capita. Raising it is the declared aim of economic development.

GDP has grown globally over the last 40 years, actually much closer to exponentially than has the population. Global GDP is now four times higher than when we wrote *The limits to growth*. That makes many economists confident that such growth rates are the future norm.

Yet on closer observation, the growth path of a nation is more like an S-curve. This is seen in the historical statistics of all rich nations, and now also in China.

The output per person will level off around 2050

China’s growth rate has declined over the last couple of Five-Year Plans, from above 10% per year to perhaps 7.5%. The growth rate will further decrease as China continues to move up the economic ladder, and finally, around the middle of the century, reach the USA’s growth rate, which is below 1% (in GDP per person). Tractors and fertiliser pushed people away from their farms and pulled them into factories. Adding machinery and robots liberated labourers and got them into office work. More recently, computers have been moving the workforce into services, entertainment and education. In 30 years, many of us in the rich world will be working in social care. This means that in a mature economy, growth has to occur in offices, research groups, universities or care homes. That is harder than on farms and in factories. That is why individual countries have seen their GDP growth per person declining in the past 40 years.

Globally this is masked by the growth of new countries entering a high-productivity phase. Yet those economies will also mature. That is why I predict that the output per person will continue to increase, but at a declining rate, levelling off around 2050.

Combined with a declining workforce, this results in a GDP which will peak after 2050 at more than double today’s value and then start to decline. The world production of goods and services will shrink in the

second half of the century. This is a blessing, as it will avoid a full-blown disaster and give mankind a bit more time to learn to live within its means. Yet few economists ever dare to think about this.

Energy

The technology ('T') in the IPAT equation is not primarily ingenuity, it is largely energy. Technological advance is largely the substitution of energy for thinking, for muscular power, for transport. Most of the progress in well-being and income has been brought by increased energy use.

Efficiency gains seen over the past 40 years will continue to rise. Cars, houses and industries will use less and less energy per unit of output. Energy use per unit GDP will continue to decrease.

Multiplying this with total GPD gives a peak of global energy consumption around 2030, after which annual use will start to decline.

Yet not every energy source will peak in the same way. Coal use will increase sharply over the next 20 years, largely because of China and other big emerging economies.

'Peak oil' will occur, but not as a sharp peak; it is more of a 20-year plateau at a level that has been more or less reached. Today unconventional oils are coming online fast enough to compensate for declining conventional oil production. Technology did come to the rescue – yet in the process, oil prices tripled.

The use of natural gas will increase for decades because it has become so cheap in some countries, such as the USA, where utilities can offer competitive power from cheap shale gas. Politically, it is often an easy choice.

In my forecast, nuclear power will move into a slow decline. By 2050 there will be fewer nuclear plants in the Western industrialised world. Many plants in the USA, the UK, France and Russia will have reached the end of their life-cycle by 2050. New plants currently being built or planned could still be online, but the epicentre of nuclear power will shift to China, India, Pakistan and the big emerging economies.

In the longer run, fossil fuels will be gradually squeezed out by renewables. I foresee a tremendous increase in the installed capacity of wind, solar and biomass energy. Taken together, renewables will be

larger than any other energy source in 2050. Still, they will account for only 40% of total energy consumption.

Reaching a 100% renewable economy in 2050 has become virtually impossible. This was different 10 years ago, when the World Wildlife Fund (now World Wide Fund for Nature) wrote its Climate and Energy Plan. Back then it was technically still possible to make the world fully renewable in 2050 without scrapping any already-existing power plant before the end of its economic life. Today that window of opportunity is gone. There is no way to reach 100% renewable without prematurely decommissioning installed fossil capacity. Without such divesting, even in the best case humanity will still rely on fossil fuels in 2050.

At the other end of the spectrum, if nothing were done to push renewables and market forces alone were to decide, the cheapest options would prevail, and wind and solar and biomass would enter much more slowly, perhaps leading to a share of less than 25% renewables in 2050.

But I believe there is still some sanity in the world: we will keep pushing renewables. In reality, the world will therefore end up somewhere in between. Looking at the numbers more closely, I conclude that we will reach a 40% share of renewables.

Climate change

Taken together, my forecasts for demographics, economic growth and energy use give the future impact of human activity, exactly as in the IPAT equation. This gives a sobering prognosis for carbon dioxide emissions. Emissions will not stop growing before 2030, and only then start a decline until they more or less equal today's emissions in 2050. This is bad news for those who hope that carbon dioxide emissions will have started declining in 2015, as is needed to keep global warming below 2 degrees Celsius. My forecast will produce a peak temperature rise of around 3 degrees Celsius. This maximum will be reached around 2080. This is above the threshold deemed safe by the climate scientists.

But it is still below what some fear. It is well below the business-as-usual scenario of IPCC, and the reason is that I forecast a declining workforce and growth rate in productivity. The emissions I foresee are lower than

conventional thinking. Yet they remain above what will be needed to solve the climate problem. The world population and economy will grow slower than many expect, but still fast enough to trigger a climate crisis.

By 2050, 105 years after my birth, the ongoing increase in extreme weather events will have reached scary dimensions. Climate scientists are not exactly sure how bad it will be, but the sea levels will rise some 30 centimetres (1 foot), and we will see untypical floods, recurring droughts and landslides in new places. In the latter half of the century, the permafrost may melt at self-reinforcing speed. We could have prevented this back in the 1970s, when humanity was still living within the global limits. By 2050, we will have to spend a lot to reduce the continuing climate damage. One blessing in my forecast is that I don't see any collapse before 2050. There will be intense problems, but no sudden decline in population or standard of living. Things will simply get worse, but we won't hit real limits before 2050. We won't see a sudden and abrupt fall in living standards. Neither do I see acute and unsolvable problems with food, water or other resources.

So although we will reach 2050 without collapse, the future for those living then will look grim. Society will grow poorer because so much money will need to be poured into repair and adaptation. This will come at a time when global GDP shrinks – because of population decline and stagnation in productivity. GDP per person will at best stay constant, but consumption will decline. I can only hope that our grandchildren have better skills in managing their ruined planet than we had.

Some people think that food production will hit a physical limit, having had to increase so sharply over the last decades. But they forget that the planet's physical capacity to produce food is roughly three times what we use today, even when sustainable practices are used. I learned this 40 years ago, when I modelled the food sector for *The limits to growth*.

Making it not happen

My predictions are not what I wish to happen. They are what I think is most likely to happen. Some think that my view is horrible and immoral, claiming that predicting some 60% of energy in 2050 will still be produced

by fossil fuels is saying that humanity will not solve the problem and will continue to behave stupidly. I agree this is not a very complimentary view of the human race. But it is the likeliest pathway.

One way to try to improve prospects is to consume less and use less energy. This was in fact the essence of our proposed solution in 1972 in *The limits to growth*. It was again our dream when we wrote the follow-up reports in 1992 and 2004. Voluntary reduction of ecological footprints, either as an individual or as a nation, has been a central element in the environmental movement over recent decades. In my country, Norway, the low-consumption movement was established in the same year we wrote *The limits to growth*.

Build small houses with thick walls instead of big houses with thin walls

Yet in 40 years, very little has been achieved towards this end.

One main reason is the threat of unemployment. If people stop buying, factories will close and unemployment will rise. One way to overcome this is by shifting the demand towards cleaner products – replacing, for example, a regular car with an electric car. Or building small houses with thick walls instead of big houses with thin walls. This would save energy and materials, but wouldn't reduce the number of jobs. But getting people to accept smaller houses and more expensive cars is complicated even in very rich societies. The challenge is to spread the cost of reduced growth in an equitable manner, preventing a rise in unemployment that would increase inequality. One solution would be to reduce everybody's annual work hours, so we have less time at the job to produce more stuff, and more time off to enjoy the intangible aspects of life. This is an old idea. John Maynard Keynes anticipated it in the midst of the Great Depression in his 1930 essay 'Economic possibilities for our grandchildren'. He predicted that technology would free his hypothetical grandchildren from the toils of labour and bring unprecedented leisure, with three hours of labour a day being enough to provide everything they could wish for,

thanks to the acceleration technology would bring. His foresight into technological progress was correct and working hours are getting shorter, but not as dramatically as Keynes envisaged, because the majority has wanted more wealth than he could imagine. Also it is much simpler to solve the problems of modern society by growth rather than redistribution. Growth can eliminate poverty without sacrifices; it solves employment and provides adequate pensions. The alternative is not obvious, as redistribution hurts. Yet if society is to slow consumption growth, or at least the growth in the ecological footprint, this is the challenge we face. Forcing people to take more annual holiday would be one way of doing it, which is conceivable with the support of a political majority.

It wouldn't make people any less happy. The New Economics Foundation's Global Happiness Index is helpful in understanding this. It appears that happiness depends on much more than income. People weren't any unhappier in the 1970s, when income was much less than today.

These surveys are very sensitive to cultural context, less so to the perception of actual living conditions. A better way is to ask people to compare their current situation with their situation five years ago and their ideas about the situation in five years' time. Of the 30,000 Chinese we asked these questions in autumn 2012, some 75% saw continued progress. They thought they were better off then than they had been five years earlier and would be better off still five years in the future. In a similar survey in Norway a few months later, only 25% answered better-better, with 25% same-same. This is in spite of the fact that Norwegian real purchasing power has gone up by 15% in the last five years. This supports the fact that income matters less once basic needs are fulfilled. But happiness is also affected by distribution: you are less happy if your neighbour is richer. These simple facts should be the guide for those societies that want to steer towards a happier life for their citizens.

Acting on this requires a long-term vision. You need to trade short-term costs for longer term well-being. Many people are used to looking a few years ahead in their personal life. They are willing to sacrifice income for five years of education, which only pays out much later, and people often save for years to buy a house.

But to solve the energy and climate problems of the planet, a much longer vision is needed. People have to sacrifice today for a possible but uncertain benefit to their children or grandchildren in order to solve the climate problem. But the vast majority of rich-world voters are not willing to incur such costs. The core problem of modern society is that society as a whole has an extremely short-term horizon, institutionalised by high discount rates, four-year election periods, and a focus on quarterly reporting in business. Our society's institutions are short-term, not because they need to be so, but because we want them to be. Sadly, our preferred institutions of democracy and capitalism do not seem capable of solving the problem of shortsightedness. In the last few years I have tried to convince Norwegians to accept a tax increase of €250 per person per year, since this would be enough to solve the climate problem. Yet even in one of the richest countries in the world, it has proved impossible to find broad support for the solution of raising the average income tax from 37 to 38%. Human beings do indeed have a short-term focus. It is indeed impossible to solve the climate and energy problems within the limits of the present, shortsighted form of democracy and capitalism. I believe there is need for added regulation to achieve a better long-term future. Japan, South Korea and China showed the way when they moved from poor to rich nations from the 1950s onwards in a centrally planned manner. In very rough terms one can say that the Ministry of International Trade and Industry built Japan and the Chaebol corporate giants in South Korea shaped that country. China has been successful thus far through the authority of the Communist Party. It is an autocracy, but an inclusive one, with 80 million party members and ample occasion for thought exchange over the Internet and elsewhere. Some other emerging economies may follow this path.

This type of quasi-democracy is not uncommon in the West, especially in times when much is at stake. It was how the Norwegian Labour Party and its Ministry of Finance jointly built the Norwegian welfare state in the first two decades after 1945. Most nations have central banks run by experts who have been given authority to make far-reaching decisions. Even the Italians recently chose a cabinet of experts to run their country in the midst of the financial crisis.

I don't think, however, that we will see a large-scale move towards a quasi-democratic administration in the coming decades; there is too much distrust in strong government. As a consequence, we will see a gradual worsening, to which democratic society will not respond.

Yet it won't be a smooth development. It will be a bumpy ride. The increasingly frequent extreme weather we will see is more than just a little more wind or rain. It starts to get scary when 100-year-old trees start falling down. It will be very unpleasant, and increasingly so.

This will coincide with other potentially explosive imbalances, such as the inequality bubble – the fact that a very small elite, particularly in the USA, has benefited most from recent income growth – and the unemployment bubble, which is most prominent in Europe. There will inevitably be counter-reactions. Spaniards are not going to live with 25% unemployment among the young for 20 years. Debts will not be repaid in full. Pensions will not be paid as agreed. In one way or another we will have to take from the rich and give to the poor. There might be a debt amnesty so that much debt gets scrapped, or a meaningful tax imposed on the rich.

The path to 2050 will be tumultuous and full of conflict, like all other paradigm shifts. The sensible crowd will win in the end, but not fast enough to avoid damage to the planet. They will win only after the destruction caused by climate change, resource depletion, biodiversity loss, and growing inequity can be easily seen and felt.

Please help make my forecast wrong.

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Jorgen Randers is a Norwegian environmental scientist, dynamic systems expert and Professor of Climate Strategy at the BI Norwegian Business School, where he teaches scenario analysis and corporate responsibility. He was formerly President of the BI Norwegian Business School from 1981 to 1989, and Deputy Director-General of WWF International (World Wide Fund for Nature) in Switzerland from 1994 to 1999. He has authored a number of books and scientific papers, including co-authoring *The limits to growth* (1972) and its sequels in 1992 and 2004. He recently wrote *2052 – A global forecast for the next forty years*.

Annex 528

P. Sands & J. Peel, *Principles of International Environmental Law* (Cambridge University Press, 2018), pages 240-244, 741-755

Principles of International Environmental Law

Philippe Sands and Jacqueline Peel
with Adriana Fabra and Ruth MacKenzie

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case. Although the ICJ and a WTO panel have declined to state that the principle has a customary international law status, the ITLOS Seabed Disputes Chamber has, in effect, reached that conclusion. The reluctance to embrace a clear view is no doubt informed by doubts and differences as to what the practical consequences of the precautionary principle or approach will be in a particular field or in a specific case.[288] At the very least, precaution contributes to the interpretation of international instruments in a manner that will enhance the protection of the environment in cases of scientific uncertainty as to the impact of a particular activity.

POLLUTER PAYS PRINCIPLE

The polluter pays principle indicates that the costs of pollution should be borne by the person responsible for causing the pollution. The meaning of the principle, and its application to particular cases and situations, remains open to interpretation, particularly in relation to the nature and extent of the costs included and the circumstances in which the principle will, perhaps exceptionally, not apply. The principle has attracted broad support, and is closely related to the rules governing civil and state liability for environmental damage (as described in Chapter 16), the permissibility of certain forms of state subsidies, and the acknowledgment in various instruments by developed countries of the 'responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment', as well as the financial and other consequences that flow from this acknowledgment.[289] The practical implications of the polluter pays principle are in its allocation of economic obligations in relation to environmentally damaging activities, particularly in relation to liability,[290] the use of economic instruments, and the application of rules relating to competition and subsidies.[291]

The polluter pays principle has not received the same degree of support accorded over the years to the principle of preventive action, or the attention accorded to the precautionary principle, although its use has been taken up in a number of regional agreements.[292] In the *Rhine Chlorides* case, the arbitral tribunal noted that the principle 'features in several international instruments, bilateral as well as multilateral, and ... operates at various levels of effectiveness', but the tribunal '[did] not view this principle as being a part of general international law'.[293] The strong objections of some countries to the further development of the polluter pays principle, particularly for international relations, is evident from the compromise language adopted by Principle 16 of the Rio Declaration, which provides that:

> National authorities should endeavour to promote the internalisation of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the costs of pollution, with due regard to the public interests and, without distorting international trade and investment.

[288] In this sense, see Separate Opinion of Judge Treves, *Southern Bluefin Tuna* case, para. 9.
[289] 1992 Rio Declaration, Principle 7.
[290] See Institut de Droit International, Resolution on Responsibility and Liability under International Law for Environmental Damage, Art. 13, 37 ILM 1473 (1998).
[291] See respectively Chapter 16, p. 771; Chapter 4, p. 132; and Chapter 18, p. 894.
[292] See e.g. 2002 North-East Pacific Convention, Art. 5(6)(b).
[293] *Rhine Chlorides* case (2004), para. 103.

This text, which falls short of the more specific language of EU, OECD and UNECE instruments, includes language that limits the extent of any obligation that might apply to states.[294] This derives, at least in part, from the view held by a number of states, both developed and developing, that the polluter pays principle is applicable at the domestic level but does not govern relations or responsibilities between states at the international level.

The polluter pays principle in treaty law can be traced back to some of the first instruments establishing minimum rules on civil liability for damage resulting from hazardous activities. The conventions on civil liability for nuclear damage, the 1960 Paris Convention and the 1963 Vienna Convention,[295] were influenced by the desire to channel compensation from those responsible for the activity causing damage to the victims. Under the 1969 CLC, however, the shipowner was precluded from relying on the limitation of liability if the incident occurred as a result of his actual fault or privity.[296]

OECD

The first international instrument to refer expressly to the polluter pays principle was the 1972 OECD Council Recommendation on Guiding Principles Concerning the International Economic Aspects of Environmental Policies, which endorsed the polluter pays principle to allocate the costs of pollution prevention and control measures to encourage rational use of environmental resources and avoid distortions in international trade and investment.[297] The Recommendation defined the principle in a limited sense to mean that the polluter should bear the expenses of carrying out the measures deemed necessary by public authorities to protect the environment:

> In other words, the cost of these measures should be reflected in the cost of goods and services which cause pollution in production and/or consumption. Such measures should not be accompanied by subsidies that would create significant distortions in international trade and investment.[298]

The 1972 Recommendation does not, on the face of it, apply to the costs of environmental damage. In 1974, the OECD Council adopted a further Recommendation on the Implementation of the Polluter-Pays Principle, which reaffirmed that the principle constituted a 'fundamental principle' for member countries, that aid given for new pollution control technologies and the development of new pollution abatement equipment was not necessarily incompatible with the principle, and that member countries should strive for uniform observance of the principle.[299] The 1989 OECD Council Recommendation on the Application of the Polluter-Pays Principle to Accidental Pollution extended the principle to imply that the operator of a hazardous installation should bear the cost of reasonable measures to prevent and control accidental pollution from that installation, which are introduced by public authorities in conformity with domestic law

[294] See WSSD Plan of Implementation, para. 14(b). [295] Chapter 16, pp. 773–5.
[296] Art. V(2), Chapter 16, p. 780; see also 1977 Civil Liability for Oil Pollution Convention, Art. 6(4).
[297] OECD Council Recommendation C(72)128 (1972), 14 ILM 236 (1975).
[298] *Ibid.*, Annex, para. A.4. The Council further recommended that 'as a general rule, Member countries should not assist the polluters in bearing the costs of pollution control whether by means of subsidies, tax advantages or other measures'.
[299] C(74)223 (1974), paras. I(1), II(3) and III(1), 14 ILM 234 (1975).

prior to the occurrence of an accident.[300] According to the Recommendation, however, this does not necessarily require that 'the costs of reasonable measures to control accidental pollution after an accident should be collected as expeditiously as possible from the legal or natural person who is at the origin of the accident'. Such a domestic legal requirement is merely 'consistent with', rather than implied by, the principle.[301] Examples of specific applications of the polluter pays principle cited by the 1989 Recommendation include adjusting fees or taxes payable by hazardous installations to cover more fully the cost of certain exceptional measures taken by public authorities to prevent and control accidental pollution, and charging to the polluter the cost of reasonable pollution control measures decided on by public authorities following an accident to avoid the spread of environmental damage and limit the release of hazardous substances (by ceasing emissions at the plant), the pollution as such (by cleaning or decontamination), or its ecological effects (by rehabilitating the polluted environment).[302] The Recommendation also provides guidance on 'reasonable' measures: they depend on 'the circumstances under which they are implemented, the nature and extent of the measures, the threats and hazard existing when the decision is taken, the laws and regulations in force, and the interests which must be protected'.[303] The Recommendation cites certain exceptions to the principle, including the need for rapid implementation of stringent measures for accident prevention (provided this does not lead to significant distortions in international trade and investment), or if strict and prompt implementation of the principle would lead to severe socioeconomic consequences.[304] The application of the principle does not affect the possibility under domestic law of requiring the operator to pay other costs connected with the public authorities' response to an accident, or compensation for future costs of the accident.[305]

European Union

The polluter pays principle is also established under EU law. The EU adopted the principle in its first programme of action on the environment in 1973.[306] Two years later, the European Council adopted a Recommendation regarding cost allocation and action by public authorities on environmental matters that recommended that the EU at Union level and the member states in their national environmental legislation must apply the polluter pays principle, according to which:

> natural or legal persons governed by public or private law who are responsible for pollution must pay the costs of such measures as are necessary to eliminate that pollution or to reduce it so as to comply with the standards or equivalent measures laid down by the public authorities.[307]

[300] C(89)88 (Final), 28 ILM 1320 (1989); Appendix Guiding Principles Relating to Accidental Pollution, para. 4; these are measures taken to prevent accidents in specific installations and to limit their consequences for human health and the environment, including safety measures, emergency plans, carrying out clean-up operations and minimising ecological effects, but not including humanitarian measures or measures to compensate victims for economic consequences (para. 8).

[301] Para. 5.

[302] Paras. 10 and 11; pooling by operators of certain financial risks is considered to be 'consistent' with the principle (para. 13).

[303] Para. 12. [304] Paras. 14 and 15. [305] Para. 16. [306] OJ C112, 20 December 1973, 1.

[307] Council Recommendation 75/436/EURATOM, ECSC, EEC of 3 March 1975, Annex, para. 2; OJ L169, 29 June 1987, 1.

This formulation is broader than early OECD recommendations in respect of the costs that might be covered by the principle. The Council Recommendation, which is not legally binding, identifies standards and charges as the major instruments of action available to public authorities for the avoidance of pollution, allows certain exceptions to the principle, and sets out which acts will not be considered to be contrary to the principle.[308] In 1986, the EEC Treaty was amended to provide that EU action relating to the environment shall be based on the principle that 'the polluter should pay'.[309] In 1992, the EU member states and EFTA member countries agreed that action by the parties was to be based on the principle that 'the polluter should pay'.[310] A number of acts of EU secondary legislation also refer to, or incorporate, the principle,[311] and the ECJ has occasionally considered its practical implications.[312] The principle has also been applied by the European Commission in relation to state aid.[313]

The polluter pays principle, or variations thereof, as stated in the OECD and EU instruments, has also been referred to or adopted in other environmental treaties, including the 1985 ASEAN Convention,[314] the 1991 Alpine Convention,[315] the 1992 UNECE Transboundary Waters Convention,[316] the 1992 OSPAR Convention,[317] the 1992 Baltic Sea Convention,[318] the 1994 Danube Convention,[319] the 1994 Energy Charter Treaty[320] and the 2003 Carpathians Convention.[321] The 1990 Oil Pollution Preparedness Convention and the 1992 Industrial Accidents Convention describe the polluter pays principle as 'a general principle of international environmental law'.[322] The Preamble to the 2001 POPs Convention reaffirms the formulation of the polluter pays principle found in Principle 16 of the Rio Declaration.

The increased attention paid to the polluter pays principle results, in part, from the greater consideration given to the relationship between environmental protection and economic development, as well as efforts to develop the use of economic instruments in environmental

[308] Paras. 5–7.

[309] 1957 EEC Treaty (as amended) (formerly Art. 130r(2)); see also former Art. 130(s)(5) of the EEC Treaty as amended by the 1992 Maastricht Treaty, allowing for temporary derogations and/or financial support 'without prejudice to the principle that the polluter should pay'. See now Art. 191 of the EU Treaty as amended by the Treaty of Lisbon.

[310] 1992 EEA Agreement, Art. 73(2).

[311] See e.g. Directive 75/442, Art. 15 (waste); Directive 94/67, Preamble (incineration of hazardous waste); Directive 2000/59, Preamble (port reception facilities for ship-generated waste and cargo residues); Directive 2000/60, Art. 9 (water framework); and Decision 2850/2000, Preamble (cooperation in the field of accidental or deliberate marine pollution); Directive 2004/35/EC (environmental liability). See generally EC Commission, Application of the Polluter Pays Principle, 6 December 1999.

[312] See e.g. Case C-293/97, *R.* v. *Secretary of State for the Environment and Ministry of Agriculture, Fisheries and Food, ex parte H. A. Standley and Others and D. G. D. Metson and Others* [1999] ECR I-2603, paras. 51–2 (the polluter pays principle reflects a principle of proportionality, and does not mean that farmers must take on burdens for the elimination of pollution to which they have not contributed).

[313] See European Commission, Community Guidelines on State Aid for Environmental Protection, 2001 OJ C37. For its application, see e.g. Commission Decision 1999/272, 1999 OJ L109 ('it is clearly not compatible with the "polluter pays" principle enshrined in Article 130r of the EC Treaty that a polluter should sell his contaminated land to one of his firms in order to avoid the clean-up costs, that the firm responsible for the contamination should file for bankruptcy and that the business activity should be carried on by the newly established firm').

[314] Art. 10(d). [315] Art. 2(1) (the parties respect the polluter pays principle).

[316] Art. 2(5)(b) (the parties shall be guided by the polluter pays principle 'by virtue of which costs of pollution prevention, control and reduction measures shall be borne by the polluter').

[317] Art. 2(2)(b) (the parties 'shall apply . . . the polluter-pays principle').

[318] Art. 3(4) (the parties 'shall apply the polluter-pays principle'). See also 1993 Lugano Convention, Preamble; 1994 Agreement on the Protection of the River Meuse, Art. 3(2)(d); 1996 Protocol to the 1972 London Convention, Art. 3(2).

[319] Art. 2(4). [320] Art. 19(1). [321] Art. 2(2)(b). [322] Preamble.

protection law and policy.[323] This is likely to lead to clarification and further definition of the polluter pays principle, particularly in relation to two issues.

The first concerns the extent of the pollution control costs that should be paid by the polluter. Although it seems clear that the principle includes the costs of measures required by public authorities to prevent and control pollution, it is less clear whether the costs of decontamination, clean-up and reinstatement would be included. State practice does not support the view that all the costs of pollution should be borne by the polluter, particularly in interstate relations.[324] The second issue concerns exceptions to the principle, particularly in relation to rules governing the granting of subsidies, which are in general not compatible with application of the polluter pays principle. In this regard, account should be taken of the potential role of the WTO in determining the impact of the polluter pays principle on its subsidies rules.[325]

PRINCIPLE OF COMMON BUT DIFFERENTIATED RESPONSIBILITY

The principle of common but differentiated responsibility has developed from the application of equity in general international law, and the recognition that the special needs of developing countries must be taken into account in the development, application and interpretation of rules of international environmental law. Principle 7 of the Rio Declaration states the principle thus:

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

Similar language exists in the 1992 Climate Change Convention, which provides that the parties should act to protect the climate system 'on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities'.[326] Reference to the principle is also made in the 2015 Paris Agreement, although in more muted terms; the Agreement 'will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances'.[327]

The principle of common but differentiated responsibility includes two elements. The first concerns the common responsibility of states for the protection of the environment, or parts of it, at the national, regional and global levels. The second concerns the need to take account of differing circumstances, particularly in relation to each state's *contribution* to the creation of a particular environmental problem and its *ability* to prevent, reduce and control the threat.

[323] Chapter 4, pp. 132–7.

[324] See generally Chapter 16; examples include the Chernobyl accident and the 1976 Rhine Chloride Convention, which allocates the costs of pollution abatement between the polluters (66 per cent) and the victim (34 per cent): see Chapter 9, pp. 367–9.

[325] GATT Dispute Settlement Panel, *US – Chemicals Tax* case (1987), holding that GATT rules on tax adjustment allow contracting parties to apply the polluter pays principle but do not require it: Chapter 18, p. 244, n. 325.

[326] Art. 3(1). [327] Art. 2(2).

Defining Environmental Damage

Defining environmental damage remains a complex issue. Two related issues need to be distinguished: (1) what constitutes environmental damage?; and (2) what level of environmental damage might give rise to liability?

In defining environmental damage, treaties and state practice reflect various approaches. A narrow definition of environmental damage is limited to damage to natural resources alone (air, water, soil, fauna and flora, and their interaction); a more extensive approach includes damage to natural resources *and* property that forms part of the cultural heritage; the most extensive definition includes landscape and environmental amenity.[30] On each approach, environmental damage generally does not include damage to persons or damage to property, although such damage can be consequential to environmental damage. Loss of environmental amenity, which may be included under the provisions of the 1993 Lugano Convention referring to the 'characteristic aspects of the landscape',[31] could be treated as environmental damage or damage to property, depending on the definition of the latter. The 2010 Nagoya–Kuala Lumpur Supplementary Liability Protocol to the Biosafety Protocol suggests an even broader approach: it defines 'damage' to mean 'an adverse effect on the conservation and sustainable use of biological diversity, taking also into account risks to human health'.[32]

Environmental damage has been defined in instruments establishing civil liability, particularly in relation to oil pollution, hazardous wastes and activities, and genetically modified organisms.[33] In respect of state liability, the only treaty definition is provided by the 1988 CRAMRA, which defines damage to the Antarctic environment or ecosystem very broadly, to include:

> any impact on the living or non-living components of that environment or those ecosystems, including harm to atmospheric, marine or terrestrial life, beyond that which is negligible or which has been assessed and judged to be acceptable pursuant to [the] Convention.[34]

The concept of 'pollution', which is defined in the 1979 LRTAP Convention, the 1982 UNCLOS and elsewhere, provides some assistance but cannot be used interchangeably with 'environmental damage'. 'Air pollution' in the 1979 LRTAP Convention is defined by reference to deleterious effects (which are themselves undefined) on living resources and ecosystems, human health and material property, as well as interference with amenities and other legitimate uses of the environment.[35] The distinction between environmental damage (and compensable environmental damage) and pollution is illustrated by the 1993 Lugano Convention, which provides that an operator of a dangerous activity will not be liable for damage (impairment of the environment) caused by pollution at 'tolerable' levels under local relevant circumstances.[36] Other treaties require 'adverse effects', rather than pollution, to define the consequences of activities that are to be avoided. Like pollution, the term 'adverse effects' provides some assistance in establishing a

[30] See e.g. ILC Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities, Principle 2.
[31] See also *ibid.*
[32] Nagoya–Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, Nagoya, 15 October 2010, not in force, BS VI-11, Art. 2(2)(b).
[33] See pp. 797–9. [34] Art. 1(15). The Convention has not entered into force.
[35] Art. 1(a); see also 1982 UNCLOS, Art. 1(4). [36] See pp. 799–801.

basis for, but cannot be used interchangeably with, a general definition of environmental damage. The 1985 Vienna Convention defines 'adverse effects' in relation to ozone depletion as, inter alia, 'changes in the physical environment or biota, including changes in climate, which have significant deleterious effects on human health or on the composition, resilience and productivity of natural and managed ecosystems, or on materials useful to mankind'.[37] The 1992 Climate Change Convention introduced a similar definition, although it reversed the order by placing deleterious effects on the environment before effects on human health, and extends the definition to include effects on socio-economic systems and human welfare.[38] More recently, and elaborately, the definition of 'damage' in the 2010 Nagoya–Kuala Lumpur Supplementary Liability Protocol speaks of 'an adverse effect' on biodiversity, which it describes as effect that: (i) 'is measurable or otherwise observable taking into account, wherever available, scientifically established baselines recognized by a competent authority that takes into account any other human induced variation and natural variation';[39] and (ii) is 'significant' when judged in light of factors such as the long-term or permanent change, the extent of qualitative or quantitative changes that adversely affect the components of biodiversity, reduction of the ability of components of biodiversity to provide goods and services, and the extent of any adverse effects on human health.[40] Thus, terms such as 'pollution' and 'adverse effects' help in determining the threshold beyond which environmental damage might trigger liability, but they do not actually define it.

Other state practice is limited. Environmental damage in the pure sense was not considered by the arbitral tribunal in the *Trail Smelter* case, although the *Lac Lanoux* arbitration implicitly recognised the possibility of pure environmental damage when it referred to changes in the composition, temperature or other characteristics of the waters of the River Carol which injured Spanish interests.[41] Treating environmental damage as a separate head was recognised in the claims by Australia and New Zealand in the *Nuclear Tests* cases, and by Nauru in the *Case Concerning Certain Phosphate Lands in Nauru*. It was also recognised – implicitly – by the ICJ in the *Case Concerning the Gabčíkovo–Nagymaros Project*.[42] In its 2011 Advisory Opinion on *Responsibilities and Obligations in the Area*, ITLOS considered the concept of 'damage' in Article 139(2) of UNCLOS, which provides 'damage caused by the failure of a State Party or international organization to carry out its responsibilities under this Part shall entail liability'.[43] Neither UNCLOS nor Regulations issued by the International Seabed Authority specify what constitutes compensable damage for the purposes of this provision. The Tribunal was of the view that 'the damage in question would include damage to the [Deep Seabed] Area and its resources constituting the common heritage of mankind, and damage to the marine environment'.[44]

Clear support for the provision of compensation for environmental damage under rules of state liability was provided by the UN Security Council in 1991 when it reaffirmed that Iraq was 'liable under international law for any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals and corporations'

[37] Art. 1(2). [38] Art. 1(1). [39] Art. 2(2)(b). [40] Art. 2(3). [41] See Chapter 9, pp. 341–2.
[42] (1997) ICJ Reports 226, para. 152 ('Hungary is entitled to compensation for the damage sustained as a result of the diversion of the Danube, since Czechoslovakia, by putting into operation Variant C, and Slovakia, in maintaining it in service, deprived Hungary of its rightful part in the shared water resources, and exploited those resources essentially for their own benefit').
[43] See further pp. 764–7. [44] *Responsibilities and Obligations in the Area*, para. 179.

occurring as a result of its unlawful invasion and occupation of Kuwait.[45] UN Security Council Resolution 687, binding on the world, unequivocally determined that a state can be liable for the environmental damage and depletion of natural resources which result from unlawful use of force. Resolution 687 did not, however, define environmental damage or depletion of natural resources, or provide guidance to the Compensation Commission on their assessment, or the measure, of reparation or compensation.[46] The practice of the Claims Commission, which concluded its processing of claims in 2005, may provide some assistance to other international bodies, including courts and tribunals in defining environmental damage.[47]

Threshold at which Environmental Damage Entails Liability

While all pollution or human activity having adverse effects might give rise to environmental damage, it is unlikely that all environmental damage results in state liability. There are no agreed international standards that establish a threshold for environmental damage that triggers liability and allows claims to be brought. State practice, decisions of international tribunals and the writings of jurists suggest that environmental damage must be 'significant' or 'substantial' (or possibly 'appreciable', which suggests a marginally less onerous threshold) for liability to be triggered.

A 1993 European Commission Green Paper on Environmental Liability identified several possibilities for determining the level of environmental damage triggering liability. These included defining environmental damage by reference to 'critical loads', which describe the point at which a pollutant becomes concentrated in the environment at a level which cannot be diluted or broken down by natural processes;[48] or by reference to environmental indicators and environmental accounting to measure environmental performance, pressures and conditions;[49] or by reference to existing international legislation which establishes quality standards for flora and fauna, water and air quality and which might be considered to establish a threshold for environmental damage above which a person responsible for the increase would be considered liable for the consequences. International instruments that set environmental quality standards, or product, emissions or process standards, may also provide some guidance as to the level of environmental damage considered to be tolerable or acceptable by the international community.

Some guidance may also be found in the exchange between the then President of the ICJ, Sir Humphrey Waldock, and the government of Australia in the *Nuclear Tests* case, reflecting a view that not every transmission of chemical or other matter into another state's territory, or into the global commons, will create a legal cause of action in international law.[50] The tribunal in the *Trail Smelter* case held that the injury must have a 'serious consequence' to justify a claim.[51] In its claim against Australia, Nauru argued for a general principle based upon an obligation not to bring about changes in the condition of territory which will cause 'irreparable damage to, or

[45] Security Council Res. 687 (1991); see pp. 755–60.
[46] See pp. 755–60; and UNEP, *Report of the Working Group of Experts on Liability and Compensation for Environmental Damage Arising from Military Activities* (1996).
[47] See pp. 755–60, for a discussion of the practice of the Commission.
[48] COM (93) 47, 17 March 1993; see also 1992 Climate Change Convention, Art. 2 (stabilisation of greenhouse gas concentrations); 1985 SO_2 Protocol, Art. 2; and 1991 VOC Protocol, Art. 2 (critical levels).
[49] OECD Council Recommendation, Environmental Indicators and Information, C(90)165/final (1991).
[50] Chapter 7, pp. 255–6.
[51] *Ibid.*, pp. 254–5.

substantially prejudice' the legal interest of another state.[52] A similar approach underlay Hungary's Original Application in the *Case Concerning the Gabčíkovo–Nagymaros Project*.[53] The Canadian claim following the crash of Cosmos 954 was brought in the context of damage to land which made it 'unfit for use', a level of damage which supports the view that the impact on the environment must be more than nominal to establish a claim.[54] A number of the civil liability instruments, discussed below, establish thresholds for environmental damage or adverse effects which are 'significant',[55] or 'serious',[56] or above 'tolerable levels',[57] and the International Law Association's Montreal Rules call on states to prevent 'substantial injury'.[58] In its efforts to draft rules on liability for transboundary harm from hazardous activities, the ILC initially used the term 'appreciable' in describing the threshold of damage.[59] However, after a review of relevant international instruments, the Commission reached a different view. Its 2001 draft Articles on the Prevention of Transboundary Harm refer to the concept of 'significant transboundary harm',[60] and its later 2006 Draft Principles on the Allocation of Loss for Transboundary Harm are directed to compensation for 'significant damage'.[61] In the commentaries to the 2006 Draft Principles, the ILC observed:

> The term 'significant' is understood to refer to something more than 'detectable' but need not be at the level of 'serious' or 'substantial'. The harm must lead to a real detrimental effect on matters such as, for example, human health, industry, property, environment or agriculture in other States. Such detrimental effects must be susceptible of being measured by factual and objective standards.[62]

Establishing the appropriate threshold turns on the facts of each case, and may vary according to local or regional circumstances.[63] The limited state practice supports the view that the threshold to be crossed may still be established at a relatively high level of environmental damage. The difficulty of agreeing a threshold was illustrated by the Chernobyl accident, which raised numerous issues over what constituted harmful levels of radioactivity in the absence of legally binding international standards. Several international guidelines establish radiation dose limits for the whole human body or for specific organs or tissues. The European Commission had

[52] Chapter 12, pp. 606–8.
[53] Chapter 9, pp. 345–51. The question of the threshold for damage would also have been in issue in the case of *Aerial Herbicide Spraying* brought by Ecuador against Colombia before the ICJ, however, the case was withdrawn in 2013 at the request of Ecuador.
[54] See p. 763. [55] 1992 Watercourses Convention, Art. 1(2).
[56] 1992 Industrial Accidents Convention, Art. 1(d).
[57] 1993 Lugano Convention, Art. 8(d). See also the 2010 Nagoya–Kuala Lumpur Supplementary Liability Protocol that speaks of 'adverse effects' (pp. 797–9).
[58] Art. 3(1).
[59] UN Doc. A/CN 4/428 and Add. 1; *Yearbook of the International Law Commission* (1990-II), Part 1 (Documents of the 42nd Session) A/CN.4/SER.A/1990/Add.l, 83 at 89.
[60] ILC, Draft Articles on Prevention of Transboundary Harm from Hazardous Activities with commentaries, 2001, *Yearbook of the International Law Commission* (2001-II), Part 2, Arts. 1 and 2, and see the commentary to Art. 2, para. 4.
[61] UN Doc. A/61/10; ILC, Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities with commentaries, 2006, *Yearbook of the International Law Commission* (2006-II), Part 2, Principle 2.
[62] *Ibid.*, commentary to Principle 2, para. 2. [63] See *ibid.*, para. 3.

published recommendations on dose levels as guidelines for national authorities in setting specific levels at which products might be deemed unsafe (intervention levels),[64] and similar guidelines had also been prepared by the International Commission on Radiological Protection (ICRP),[65] the WHO,[66] the IAEA[67] and the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). At the time of the Chernobyl accident, little consideration had been given to the control of foodstuffs contaminated by an accidental release of radioactivity, and national authorities set their own intervention levels according to a range of different standards,[68] which led to disputes on the permissibility of intervention measures which affected international trade. The European Commission initially suspended the import of certain agricultural products from Central and Eastern Europe, and then laid down the maximum permitted level of radioactivity for products originating from these countries.[69] Individual EU member states adopted their own intervention levels that were used as the basis for undertaking national compensation to affected farmers and other businesses.[70]

The absence of generally accepted standards on safe levels of radioactivity made it difficult to assess whether these measures were justified, and resulted in confusion, concern and public suspicion, as well as constraints on international food trade.[71] The FAO subsequently proposed 'Interim International Radionuclide Action Levels for Food' (IRALFs) to cover food being traded internationally, which, while non-binding and *ex post facto*, provided a useful standard for assessing whether the increases in radioactivity caused by the Chernobyl accident were harmful to foodstuffs and whether intervention levels were justified under international law.[72]

Liability can be closely related to the adoption of regulatory standards. As the international community adopts such standards, the task of identifying the level of compensable environmental damage becomes easier. Conversely, in the absence of international standards concerning the quality of the environment, including conservation of flora and fauna, states will set their own standards, resulting in divergences with resulting economic and environmental consequences.

[64] Radiological Protection Criteria for Controlling Doses to the Public in the Event of Accidental Releases of Radioactive Material: A Guide on Emergency Reference Levels of Dose from the Group of Experts Convened under Article 41 of the EURATOM Treaty (1982).

[65] 'Protection of the Public in the Event of Major Radiation Accidents: Principles for Planning', 40 *Annals of the ICRP*, No. 2, 5–7 and 12–14 (1984).

[66] Nuclear Power: Principles of Public Health Actions for Accidental Releases (1984).

[67] Principles for Establishing Intervention Levels for the Protection of the Public in the Event of a Nuclear Accident or Radiological Emergency (IAEA Safety Series No. 72, 1985).

[68] See FAO, 'Report of the Expert Consultation on Recommended Limits for Radionuclide Contamination of Foods' (1987), Table II, for examples of varying post-Chernobyl 'action levels' applied by some countries for certain radionuclides (in terms of becquerels per kilogram or litre (bq/kg or bq/l)) in imported foods, as at December 1986.

[69] Council Regulation (EEC) No. 86/1707, OJ L146, 31 May 1986, 88; the Regulation was extended on 30 September 1986 and on 27 February 1987 by Council Regulations (EEC) Nos. 86/3020 and 87/624. Council Regulation (EC) No. 733/2008 of 15 July 2008, as amended by Council Regulation (EC) No. 1048/2009 of 23 October 2009, establishes the current conditions governing imports of agricultural products originating in third countries following the accident at the Chernobyl nuclear power station and will expire on 31 March 2020.

[70] West Germany, Equity Guideline, *Bundesanzeiger* of 27 May 1986, No. 95, 6417; United Kingdom, Food Protection (Emergency Prohibitions) (England) Order 1986 (SI 1986 No. 1411).

[71] FAO, 'Report of the Expert Consultation on Recommended Limits for Radionuclide Contamination of Foods', 3.

[72] The IRALF for Iodine-131 was set at 400 bq/kg; the EU imposed import restrictions on milk of 500 bq/kg and on vegetables of 350 bq/kg.

Standard of Care

If there is an obligation to prevent significant, substantial or serious environmental damage, what is the standard of care applicable to that obligation? Options include fault (based upon intention or negligence), strict liability ('essentially a *prima facie* responsibility, and various qualifications or defences may be available')[73] and absolute liability ('for which there can be no mode of exculpation').[74] Although this question has received considerable attention from writers,[75] it is reasonable to conclude that there 'is probably no single basis of international responsibility, applicable in all circumstances, but rather several, the nature of which depends on the particular obligation in question'.[76] The obligation in question may distinguish between ultrahazardous activities and other activities.[77] This approach can be justified on policy grounds: dangerous activities are more likely to cause serious environmental damage, and a strict or absolute obligation is more likely to provide an incentive to states to adopt special precautions when engaging in or permitting such activities.

International law remains inconclusive on general rules governing the standard of care to be shown in fulfilling international environmental obligations. Principle 21 of the Stockholm Declaration and Principles 2 and 13 of the Rio Declaration do not provide guidance either way, and the decisions of international tribunals in the *Trail Smelter* case, the *Corfu Channel* case, the *Lac Lanoux* case and the *Nuclear Tests* cases can be interpreted to support conclusions of absolute/strict liability or fault-based liability. In respect of ultrahazardous activities, certain treaties do support a standard of absolute or strict, liability. The 1972 Space Liability Convention supports absolute liability,[78] and, in reliance on this provision and general principles of international law, following the Cosmos 954 accident Canada claimed that 'the principle of absolute liability applies to fields of activity having in common a high degree of risk ... [and] has been accepted as a general principle of international law'.[79] The 1988 CRAMRA also supports liability without the need to prove fault.[80] The standard of care required by the provisions of UNCLOS establishing liability in respect of damage caused by the failure of a state party to carry out its responsibilities under Part XI was considered by ITLOS in its Advisory Opinion on *Responsibilities and Obligations in the Area*.[81] In relation to these provisions, the Tribunal held 'the liability of sponsoring States arises from their failure to carry out their own responsibilities and is triggered by the damage caused by sponsored contractors' and that there 'must be a causal link between the sponsoring State's failure and the damage, and such a link cannot be presumed'.[82] The Tribunal rejected the argument that the sponsoring state was subject to strict liability under Article 139(2) of UNCLOS, noting that 'liability for damage of the sponsoring State arises only from its failure to meet its obligation of due diligence. This rules out the application of strict liability.'[83]

[73] I. Brownlie, *System of the Law of Nations*, Part 1, 'State Responsibility' (Oxford: Clarendon Press, 1983), 44.
[74] *Ibid.*; see L. F. E. Goldie, 'Concepts of Strict and Absolute Liability and the Ranking of Liability in Terms of Relative Exposure to Risk', 16 *Netherlands Yearbook of International Law* 175 (1985).
[75] See the discussion by Brownlie, *System of the Law of Nations*, 40–6, and the literature cited therein.
[76] Jennings and Watts, *Oppenheim's International Law*, vol. I, 509.
[77] On 'ultrahazardous' and 'dangerous' activities, see Chapter 12, p. 573.
[78] Art. II.
[79] 18 ILM 907 (1992).
[80] Art. 8.
[81] UNCLOS, Art. 139(2) and Annex III, Art. 4(4).
[82] *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* (Advisory Opinion) (Seabed Disputes Chamber of the International Tribunal for the Law of the Sea, ITLOS Case No. 17, 1 February 2011), para. 184.
[83] *Ibid.*, para. 189.

Strict liability for ultrahazardous activities might be considered a general principle of law as it is to be found in the national law of many states in relation to ultrahazardous activities.[84] Under English law, 'a person who for his own purposes brings on his land and collects and keeps there anything likely to do mischief if it escapes, must keep it in at his peril, and, if he does not do so, is *prima facie* answerable for all the damage which is the natural consequence of its escape'.[85] Many civil liability treaties also adopt the principle of strict liability for hazardous activities, including nuclear activities, hazardous waste shipments and the carriage of oil by sea, as well as dangerous activities generally.[86] Strict liability is also supported by Jenks, who considered that, in relation to nuclear damage, the principle of absolute liability 'is generally accepted, but the expression is somewhat misleading in that it does not exclude the possibility of exceptions'.[87] The ILC's 1996 draft Articles on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law proposed that a state of origin would be strictly liable for harm to the environment and the resulting harm to property and persons.[88] This proposal was controversial, and when the Commission was requested to resume work on liability by the General Assembly in 2001 it pursued a different tack.[89] Its 2006 Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities do not impose state liability, but rather call for a state of origin to impose liability on operators or other entities for significant damage caused to persons, property or the environment, which liability 'should not require proof of fault'.[90]

For general industrial and other activities that are not ultrahazardous or dangerous, it is less easy to argue for a standard of care based upon strict or absolute liability. In considering this matter the OECD's Environment Committee has observed that there is a 'custom based rule of *due diligence* imposed on all states in order that activities carried out within their jurisdiction do not cause damage to the environment of other states', which includes establishing and applying an effective system of environmental law and regulations, and principles of consultation and notification.[91] Due diligence was identified by the ICJ in the *Pulp Mills* case as the applicable standard in respect of 'obligations of conduct' imposed under international environmental treaties, i.e. obligations to adopt and enforce regulatory and administrative measures to achieve a given environmental goal.[92] Similarly, in the Advisory Opinion on *Responsibilities and Obligations in the Area*, ITLOS observed that the expression 'to ensure' is 'often used in international legal instruments to refer to obligations in respect of which, while it is not considered reasonable to make a State liable for each and every violation committed by persons

[84] A. Tunc (ed.), *International Encyclopedia of Comparative Law* (Leiden: Brill/Nijhoff, 1986), vol. XI, ch. V.
[85] *Rylands* v. *Fletcher* (1868) LR 3 HL 330. [86] See pp. 772ff.
[87] W. Jenks, 'The Scope and Nature of Ultra-Hazardous Liability in International Law', 117 *Recueil des Cours* 99 at 144 (1966).
[88] See pp. 746–7; Arts. 24, 26 and 28.
[89] See also ITLOS, Advisory Opinion on *Responsibilities and Obligations in the Area*, para. 209, noting that the ILC's efforts have not resulted in provisions entailing state liability for lawful acts.
[90] See p. 747; Principle 4(2).
[91] OECD, Report by the Environment Committee, 'Responsibility and Liability of States in Relation to Transfrontier Pollution' (1984), 4. See also ILC, Draft Articles on Prevention of Transboundary Harm from Hazardous Activities with commentaries, 2001, *Yearbook of the International Law Commission* (2001-II), Part 2, Art. 3, para. 7.
[92] *Pulp Mills on the River Uruguay* (*Argentina* v. *Uruguay*) (2010) ICJ Reports 14, para. 187.

under its jurisdiction, it is equally not considered satisfactory to rely on mere application of the principle that the conduct of private persons or entities is not attributable to the State under international law'.[93]

The *Pulp Mills* decision and ITLOS Advisory Opinion also clarify what a due diligence standard might entail. The ICJ described 'an obligation to act with due diligence' as one 'which entails not only the adoption of appropriate rules and measures, but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators'.[94] The Court also referred to 'due diligence, and the duty of vigilance and prevention which it implies' as not being exercised 'if a party planning works liable to affect the régime of the river or the quality of its waters did not undertake an environmental impact assessment on the potential effects of such works'.[95]

For its part, ITLOS in its Advisory Opinion indicated that due diligence is 'a variable concept', which may change over time in response to developments in scientific and technological knowledge, as well as in relation to the risks involved in the activity.[96] Accordingly, the Tribunal stated that 'the standard of due diligence has to be more severe for riskier activities'.[97] ITLOS also considered that the precautionary approach is an integral part of the general obligation of due diligence of sponsoring states under UNCLOS, which requires them to take all appropriate measures to prevent damage that might result from the activities of contractors that they sponsor. This obligation applies in situations where scientific evidence concerning the scope and potential negative impact of the activity in question is insufficient but where there are plausible indications of potential risks. A sponsoring state would not meet its obligation of due diligence if it disregarded those risks, as such disregard would amount to a failure to comply with the precautionary approach.[98]

ITLOS expanded on this analysis in its 2015 *Sub-Regional Fisheries Commission Advisory Opinion*.[99] Considering the nature of the 'due diligence' obligation under Articles 58 and 62 UNCLOS on flag state parties to take all necessary measures to prevent IUU fishing by fishing vessels flying its flag,[100] the Tribunal advised:

> While the nature of the laws, regulations and measures that are to be adopted by the flag State is left to be determined by each flag State in accordance with its legal system, the flag State nevertheless has the obligation to include in them enforcement mechanisms to monitor and secure compliance with these laws and regulations. Sanctions applicable to involvement in IUU fishing activities must be sufficient to deter violations and to deprive offenders of the benefits accruing from their IUU fishing activities.[101]

[93] *Ibid.*, para. 112, citing examples such as Arts. 139 and 194 of UNCLOS. [94] *Ibid.*, para. 197.
[95] *Ibid.*, para. 204. See also *Costa Rica* v. *Nicaragua* cases, para. 104. On environmental impact assessment, see Chapter 14.
[96] ITLOS, Advisory Opinion on *Responsibilities and Obligations in the Area*, para. 117. [97] *Ibid.*
[98] *Ibid.*, para. 131.
[99] *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC)*, Case No. 21, Advisory Opinion of 2 April 2015, available at www.itlos.org/en/cases/list-of-cases/case-no-21. See Chapter 11, pp. 546–8.
[100] See further the discussion of IUU fishing in Chapter 11, pp. 546–8. [101] Para. 138.

Reparation

The principle is well established that the perpetrator of an internationally wrongful act is under an obligation to make reparation for the consequences of the violation. As expressed in the judgment of the *Chorzów Factory* case, the PCIJ stated that:

> The essential principle contained in the actual notion of an illegal act – a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals – is that reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed. Restitution in kind, or, if this is not possible, payment of a sum corresponding to the value which a restitution in kind would bear; the award, if need be, of damages for loss sustained which would not be covered by restitution in kind or payment in place of it – such are the principles which should serve to determine the amount of compensation due for an act contrary to international law.[102]

The approach is now reflected in the ILC Articles on State Responsibility (2001), which envisage that reparation for an injury caused by an internationally wrongful act shall take the form of restitution, compensation and satisfaction, either singly or in combination.[103] Restitution is aimed at re-establishing the situation that existed before the wrongful act was committed, provided and to the extent that it is not materially impossible and does 'not involve a burden out of all proportion to the benefit deriving from restitution instead of compensation'.[104] Compensation is to be provided for damage that is not made good by restitution, and should cover 'any financially assessable damage including loss of profits insofar as it is established'.[105] Satisfaction is to be provided if the injury cannot be made good by restitution or compensation, for example by an acknowledgment of the breach, an expression of regret or a formal apology.[106]

In most environmental cases, the victim will be seeking an end to the harmful act, or restitution, or financial compensation to cover the costs associated with material damage to environmental resources (pure environmental damage) and consequential damage to people and property (consequential environmental damage), including restoration or reinstatement.[107] In relation to restitution, it will be necessary to identify the baseline conditions prior to which the damage occurred, which may be difficult. Compensation raises the problem of assessing the measure of environmental damage: should it be by reference to the costs of measures of reinstatement, or on the basis of an abstract quantification calculated in accordance with a theoretical model, or on some other basis? The problem arises because environmental damage does not fit easily with the traditional approaches of civil and state liability, which are designed

[102] PCIJ (1927) Ser. A No. 17, at 47. [103] Part I, Chapter II, Art. 34. [104] *Ibid.*, Art. 35. [105] *Ibid.*, Art. 36.

[106] *Ibid.*, Art. 37. In the *Rainbow Warrior* (*New Zealand* v. *France*) case, France was required to give a 'formal and unqualified apology' to New Zealand for the sinking of Greenpeace's vessel in Auckland Harbour, and ordered to pay $7 million USD in compensation: 82 ILR 500 at 575–7 (1990); 33 *Annuaire Français de Droit International* 922–3 (1987) and 34 *Annuaire Français de Droit International* 896–8 (1988).

[107] For example, in its Original Application in the *Gabčíkovo–Nagymaros Project* case, Hungary claimed that Czechoslovakia was under an obligation to 'cease the internationally wrongful act, re-establish the situation which would have existed if the act had not taken place and provide compensation for the harm which resulted from the wrongful act' (Hungary, Original Application, 22 October 1992, para. 32). The 1997 IDI Resolution states that '[t]he fact that environmental damage is irreparable or unquantifiable shall not result in exemption from compensation' (Art. 29).

to compensate an injured person by requiring the responsible person to pay the economic costs of resulting damage, which is frequently calculated by reference to a depreciation of the economic value of the damaged item, or the cost of repairing the damage. Pure damage to the environment may be incapable of calculation in economic terms, although it may have a non-economic value requiring restoration to the state prior to the damage occurring.[108] Even here, difficulties of law and policy will continue to exist, as the European Commission's 1993 Green Paper on Environmental Liability recognised:

> An identical reconstruction may not be possible, of course. An extinct species cannot be replaced. Pollutants emitted into the air or water are difficult to retrieve. From an environmental point of view, however, there should be a goal to clean-up and restore the environment to the state which, if not identical to that which existed before the damage occurred, at least maintains its necessary permanent functions . . . Even if restoration or clean-up is physically possible, it may not be economically feasible. It is unreasonable to expect the restoration to a virgin state if humans have interacted with that environment for generations. Moreover, restoring an environment to the state it was in before the damage occurred could involve expenditure disproportionate to the desired results. In such a case it might be argued that restoration should only be carried out to the point where it is still 'cost-effective'. Such determinations involve difficult balancing of economic and environmental values.[109]

The rules of international law relating to reparation for environmental damage remain undeveloped, as evidenced by the general lack of legal precedents. Similar limitations exist at the national level. In the United States, restoration of damaged environments has been described as a 'fledgling art' with the cost and success of particular restoration measures being 'highly uncertain'.[110] Alternatives to valuing the environment for the purpose of assessing claims include the price that the environmental resource commands in the market, the economic value attached to the use of environmental resources (such as methods of costing travel relying on expenditures made by an individual to visit and enjoy a resource, or a hedonic pricing method which takes the extra market value enjoyed by private property with certain environmental amenities and assumes that public resources with comparable amenities have similar economic values), or contingent valuation methods to measure the willingness of individuals to pay for environmental goods such as clean air or water or the preservation of endangered species (usually taken from public opinion surveys).[111]

The efforts of the UN Compensation Commission in applying Security Council Resolution 687 (see below) made substantial progress in developing this aspect of international law, building on

[108] M. Bowman, 'Biodiversity, Intrinsic Value, and the Definition and Valuation of Environmental Harm', in M. Bowman and A. Boyle (eds.), *Environmental Damage in International and Comparative Law* (Oxford: Oxford University Press, 2002), 42.

[109] Communication from the EC Commission to the EC Council and European Parliament on Environmental Liability, 32, para. 5.2 (1993).

[110] R. L. Revesz and R. B. Stewart (eds.), *Analyzing Superfund: Economics, Science, and Law* (Washington, DC: Resources for the Future, 1995); R. B. Stewart, 'Liability for Natural Resource Injury: Beyond Tort', *ibid.*, 220; K. Bradshaw, 'Settling for Natural Resource Damages', 40 *Harvard Environmental Law Review* 211 (2016).

[111] See generally Stewart, 'Liability for Natural Resource Injury', 220. See also D. Pearce, A. Markandya and E. B. Barbier, *Blueprint for a Green Economy* (London: Earthscan, 1989), 51–81; M. Getzner, C. Spash and S. Stagl, *Alternatives for Environmental Valuation* (London: Routledge, 2005).

the precedents established by the *Trail Smelter* case and limited state practice, including the submission of claims. The approach taken by some of the civil liability precedents may also provide useful analogies in relation to state liability.

Trail Smelter *Case (1941)*

The tribunal in the *Trail Smelter* case found that the smelter at Trail in Canada had caused damage in the United States. The tribunal was called upon to decide what indemnity should be paid for the damage.[112] In applying the 'law and practice followed in dealing with cognate questions in the United States of America as well as international law and practice',[113] the tribunal considered the indemnity claimed by the United States for damage occurring after January 1932 in respect of: (a) cleared land and improvements thereon; (b) uncleared land and improvements thereon; (c) livestock; (d) property; (e) the wrong done to the United States in violation of sovereignty; (f) interest on the $350,000 USD recommended as damages in the report of the International Joint Commission delivered on 28 February 1931 but not paid until 2 November 1935; and (g) business enterprises. The United States did not put forward a pure environmental damage claim, although this could be read into the claim in respect of 'uncleared land'. In its 1938 award, the tribunal found that damage to cleared land used for crops had occurred in varying degrees from 1932 to 1936 but not in 1937, and adopted the measure of damages applied by the US courts for nuisance or trespass, namely 'the amount of reduction in the value of use or rental value of the land caused by fumigations'.[114] The tribunal also recognised some evidence of 'special damage' (rust and destruction of metalwork) which entitled owners to a nominal amount.

As to damage for cleared land not used for crops and to all uncleared land other than that used for timber, the tribunal adopted the same measure of damages, and rejected the US claim to the value of uncleared land at a ratio of loss measured by the reduced crop yield on cleared land. No damages were awarded for pasture lands, and as to cleared land used for merchantable timber the measure of damages was also that applied by US courts, namely 'the reduction in the value of the land due to such destruction of timber'. For growing timber, the measure of damages was 'the reduction in the value of the land itself due to such destruction and impairment',[115] but the tribunal rejected the claim for damages due to lack of reproduction. On the basis of these considerations, the tribunal awarded $62,000 USD for damage to cleared and uncleared land (other than land used for timber), and $16,000 USD for damage to uncleared land used for timber.

The tribunal rejected the claim for damage to livestock (due to the failure to prove injury from fumes from the smelter), damage to property in the town of Northport (lack of proof) and damage to business enterprises ('too indirect, remote and uncertain to be appraised and not such for which an indemnity can be awarded').[116] The tribunal also rejected the US claim for damages from the 'injurious effects' to the Columbia River caused by the disposal of waste slag. The tribunal held that it was 'unnecessary to decide whether the facts proven did or did not constitute an infringement or violation of the sovereignty of the United States under international law independent of the Convention' establishing the tribunal, since the Convention only submitted to the tribunal the question of damages caused by the Trail Smelter in the state of Washington, and it interpreted the intention of the parties as evidenced in the Convention not to include moneys

[112] Chapter 7, pp. 254–5. [113] See 1935 Convention, Art. IV, Chapter 7, pp. 254–5. [115] *Ibid.*, 204. [116] *Ibid.*, 206.
[114] *Trail Smelter* award, 199; see Chapter 7, pp. 254–5.

spent by the US in investigating the problems, since the Convention used the words 'damages caused by the Trail Smelter'.[117] For the same reason, the tribunal rejected the claim for interest on the earlier payment of $350,000 USD.

In its 1941 award, the tribunal held that the United States had failed to prove that any fumigation between 1 October 1937 and 1 October 1940 had caused injury to crops, trees or otherwise and that no indemnity was due.[118] As to any damage occurring after 1 October 1940, irrespective of compliance with the regime it had established, the tribunal held that an indemnity should be paid for such damage when and if the two governments arranged for the settlement of claims under Article XI of the Convention, as well as up to $7,500 USD per year to be paid to the United States as compensation in order to ascertain whether damage had occurred, provided that the two governments had determined under Article XI of the Convention that damage had occurred in the year in question.

The two awards of the tribunal did not deal with pure environmental damage per se, and rejected the opportunity to assess damages in respect of injurious consequences to the Columbia River. The tribunal basically took a market value approach that did not take account of loss of environmental amenity. In so doing, the tribunal took the measure of damage used by US courts, an approach which would most likely produce a different result today because of changes in US law, which reflect loss of environmental amenity or natural resources as a separate measure of damage.

State Practice

In January 1955, the US government paid $2 million USD to Japan for the 'purposes of compensation for the injuries or damage sustained' by Japanese nationals as a result of thermonuclear tests carried out by the US near the Marshall Islands in March 1954.[119] The payments were made *ex gratia* and 'without reference to legal liability', and it is unclear whether the compensation included an amount for damage to the marine environment or loss of environmental amenity.[120] In its argument in the *Nuclear Tests* case, Australia argued that, if the existence of harm or damage was essential to liability, it could point to, inter alia, the 'harm, all the more real for being incapable of precise evaluation, to which its population, both present and future, and environment have been subjected for no benefit to them'.[121] In April 1981, the Soviet Union agreed to pay, and Canada agreed to accept, C$3 million in final settlement of the Canadian claim, under the 1972 Space Liability Convention and general principles of international law, for damage incurred by way of expense in locating, recovering, removing and testing radioactive debris and for cleaning up affected areas following the crash of Cosmos 954 in January 1978.[122] And Nauru claimed 'appropriate reparation' in respect of the losses it had suffered as a result of Australia's alleged breaches of legal obligations relating to, inter alia, changes in the condition of Nauru's territory causing irreparable damage.[123]

Following the Chernobyl accident, no state made a formal claim against the Soviet Union for damage resulting from radioactive fallout, although several reserved their right to do so, including

[117] *Ibid.*, 207. [118] *Ibid.*, 709 and 712.
[119] See E. Margolis, 'The Hydrogen Bomb Experiments and International Law', 64 *Yale Law Journal* 629 at 638–9 (1955).
[120] *Ibid.*, 639. [121] Oral Arguments of Australia, *Australia* v. *France*, ICJ Pleadings (Nuclear Tests) 481 (1973).
[122] See p. 763.
[123] *Certain Phosphate Lands in Nauru* (*Nauru* v. *Australia*), Preliminary Objections, Judgment (1992) ICJ Reports 240 at 244.

the Federal Republic of Germany,[124] as they subsequently paid large sums of compensation to persons within their jurisdictions affected by the fallout.[125] Their reasons for not bringing claims reflected political and legal uncertainties. According to the Swedish Government:

> In terms of treaties there is no international agreement existing, whether bilateral or multilateral, on the basis of which a Swedish claim for damages against the USSR could be conceived. Insofar as customary international law is concerned, principles exist which might be invoked to support a claim against the USSR. The issues involved, however, are complex from the legal as well as the technical point of view and warrant careful consideration. In present circumstances, the Government has felt that priority should be given, in the wake of the Chernobyl accident, to endeavours of another nature.[126]

The position of the United Kingdom government was complicated by outstanding disputes relating to the problem of acid rain in Scandinavia, contamination of the Irish Sea by nuclear waste from the Windscale/Sellafield nuclear plant, and alleged damage to Australian territory, from the nuclear tests carried out by the United Kingdom in the 1950s. On 21 July 1986, the Secretary of State for Foreign and Commonwealth Affairs in a written answer in the House of Commons said:

> On 10 July we formally reserved our right with the Soviet government to claim compensation on our own behalf on behalf of our citizens for any losses suffered as a consequence of the accident at Chernobyl. The presentation of a formal claim, should we decide to make one, would not take place until the nature and full extent of any damage suffered had been assessed.[127]

Three months later, the Minister of State for Agriculture, Fisheries and Food stated that:

> We have reserved our position on whether the USSR will be required – as it should be if the case is proved – to pay compensation.[128]

The position was put thus by the Parliamentary Under-Secretary of State for Scotland:

> The USSR is not a party to any of the international conventions relating to third party liability in nuclear energy, and is therefore not subject to any specific treaty obligation to compensate for damage caused outside its national boundaries.[129]

[124] Communication between the Embassy of the Federal Republic of Germany in London and P. Sands, 8 December 1987.
[125] By 1 December 1987, the United Kingdom had paid £4,950,199 in compensation (figures supplied by Ministry of Agriculture, Fisheries and Food); the Federal Republic of Germany had paid DM390 million in compensation (figures supplied by London Embassy of the Federal Republic of Germany); and Sweden had paid SK204 million in compensation to farmers, up to 30 June 1987, and SK117 million to the reindeer industry during the budget year 1986/7 (figures supplied by Swedish Embassy in London).
[126] Correspondence with the Swedish Embassy in London, 10 December 1987.
[127] *Hansard*, House of Commons, 21 July 1986, vol. 102, col. 5(W).
[128] *Ibid.*, 24 October 1986, vol. 102, col. 1455.
[129] *Ibid.*, 16 November 1987, vol. 122, col. 894.

Following the accident, the IAEA convened various meetings on liability for nuclear damage, which led to the establishment of a Standing Committee on Nuclear Liability.[130] The IAEA Board of Governors requested the Director General to invite comments from member states on the question of international liability, which elicited responses from thirty-two states representing a broad range of views on the relevant rules of international law.[131] Responses of states were of four types: (1) five states considered that principles or rules of international law existed upon which state liability for nuclear damage could be established;[132] (2) one state saw lacunae;[133] (3) twenty-four states expressed no view either way;[134] and (4) two states considered or suggested that norms of liability could only be based upon treaty.[135] It is therefore difficult to discern firm principles arising from the Chernobyl experience.

In the *Case Concerning the Gabčíkovo–Nagymaros Project*, the ICJ confirmed that Hungary was entitled to 'compensation for the damage sustained as a result of the diversion of the Danube', but did not specifically indicate that Hungary was entitled to reparation for purely environmental damages.[136] As regards the measure of compensation, the Court merely observed that 'the issue of compensation could satisfactorily be resolved in the framework of an overall settlement if each of the Parties were to renounce or cancel all financial claims and counter-claims'.[137] The judgment therefore provides no practical guidance on how to calculate the measure of such environmental damage. This reluctance is consistent with the limited international practice concerning reparation for environmental damage at the interstate level, outside of the work of the UN Compensation Commission.

In April 2002, the Marshall Islands Nuclear Claims Tribunal made an award of $324,949,311 USD to the people of Enewetak, as 'just and adequate' settlement for claims of Marshall Islanders in respect of damages to land arising out of the nuclear testing programme carried out by the United States between 1946 and 1958.[138] The award included payments in respect of past and future loss of use ($199,154,811 USD), restoration to a 'safe and productive state' ($91,710,000 USD) and hardship as a result of relocation ($34,084,500 USD). The Tribunal applied standards agreed by the parties, in particular standards applicable under US law. In relation to restoration, the Tribunal accepted the position adopted by the IAEA to the effect that 'policies and criteria for radiation protection of populations outside national borders from releases of radioactive

[130] See pp. 776–7. [131] IAEA Docs. GOV/INF/550 (1988); Add.1 (1988); and Add.2 (1989).

[132] Canada ('the existence of such general principles has been recognised in diplomatic practice, by scholars, in judicial and arbitral decisions, in resolutions and declarations of international conferences, and in many bilateral and multilateral treaties' (GOV/INF/550, 6)); Chile; Federal Republic of Germany ('[i]t is undisputed that states are liable for nuclear damage caused by conduct that is contrary to international law' (GOV/INF/550, 23)); Thailand ('there exist principles of customary international law that can be applicable to an incident which results in radiological releases beyond the limits of national jurisdiction' (GOV/INF/550, 35)); and Guatemala (recognising the possibility (GOV/INF/550/Add.2, 2)).

[133] Austria.

[134] Algeria, Bulgaria, Cameroon, China, Colombia, Czechoslovakia, Egypt (supporting 'a widening of the scope of liability in time and place', GOV/INF/550, 21), Finland, German Democratic Republic, Hungary, Ireland, Italy (but noting 'the absence of a well-established set of customary rules accepted by the state community as such', GOV/INF/550, 25), Luxembourg, Mexico, Netherlands, Norway, Pakistan, Poland, the Soviet Union, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

[135] Belgium ('the situation in international law is more or less comparable to what we find in ancient Roman law, which did not know any general principle of liability and which only penalised the acts contained in a legal list of illicit acts', citing J. A. Salmon, *International Liability* (1979–80, 3rd edn), vol. 1, 6, in GOV/INF/550, 5) and Spain.

[136] (1997) ICJ Reports 226, para. 151. [137] *Ibid.*, para. 152. [138] Award of 13 April 2000, 39 ILM 1214 (2000).

substances should be at least as stringent as those for the population within the country of release', and accordingly applied the current standards applied by the US Environmental Protection Agency.[139]

UN Compensation Commission

The UN Compensation Commission was established in 1991 to provide reparation for the consequences of Iraq's unlawful invasion of Kuwait.[140] Its decisions concerning restoration and compensation for environmental claims provide a unique source of contemporary international legal practice offering important lessons in an area 'where precedents are few and far between'.[141] The Commission established criteria for claims in respect of environmental damage and the depletion of natural resources based upon a Working Paper submitted by the United States, which in turn drew upon its domestic legislation, including provisions of the Oil Pollution Act of 1990 adopted following the *Exxon Valdez* oil spill in 1989.[142] In paragraph 35 of Decision 7, the Commission's Governing Council decided that payments would be available for direct environmental damage and the depletion of natural resources, including losses or expenses resulting from:

(a) abatement and prevention of environmental damage, including expenses directly relating to fighting oil fires and stemming the flow of oil in coastal and international waters;
(b) reasonable measures already taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment;
(c) reasonable monitoring and assessment of the environmental damage for the purposes of evaluating and abating the harm and restoring the environment;
(d) reasonable monitoring of public health and performing medical screenings for the purposes of investigation and combating increased health risks as a result of the environmental damage; and
(e) depletion of or damage to natural resources.[143]

In addressing these claims, the Commission was directed to apply Security Council Resolution 687 (1991) and the above criteria and, where necessary, 'other relevant rules of international law'.[144]

Whereas paragraph 35(b) of the Governing Council criteria recognised a liability in respect of 'reasonable measures ... to clean and restore the environment', paragraph 35(e) recognised an apparently additional liability in respect of loss relating to 'depletion of or damage to natural resources'. No guidance was provided by the Governing Council as to the meaning of the distinction drawn between claims in respect of 'environmental damage' and those in respect of

[139] *Ibid.*, 1220. The EPA standard was described in 'Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination', providing that 'Cleanup should generally achieve a level of risk with the 10–4 to 10–6 carcinogenic range based on the reasonable maximum exposure for an individual ... If a dose assessment is conducted at the site ... then 15 millrem per year (mrem/yr) effective dose equivalent (EDE) should generally be the maximum dose limit for humans' (*ibid.*, 1220–1).

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Annex 529

A. Venn, *Social Justice and Climate Change,* in MANAGING GLOBAL WARMING, ed. T. Letcher (Academic Press, 2019)

Social justice and climate change☆ 24

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24.1 Introduction

> *"In the US as elsewhere, the injustice of climate change means the most vulnerable people in society—the poor, the young, the elderly, the unemployed and the marginalised—are most affected by climate impacts such as severe flooding and prolonged drought." [1] Mary Robinson.*

The remarks of the former UN High Commissioner for Human Rights and Special Envoy on Climate Change on the announcement of the withdrawal of the United States from the Paris Agreement in June 2017 poignantly illustrate the social injustice inherent in climate change impacts and, often, climate policy responses themselves. The adverse impacts of climate change, from sea-level rise, to extreme weather events and temperature rises [2] are felt most acutely by those groups in society who already experience marginalization and socioeconomic hardship [3], for whom adaptive capacity is limited. Climate change, in turn, represents a significant stress factor with the potential to compound poverty [4] and to jeopardize human security [5] and health [6]. Both direct and indirect climate impacts, including heightened food and water

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insecurity [7], and even the increased risk of outbreaks of collective violence [8], are more likely to affect low-income countries and communities. Natural disasters intensified by climate change such as tropical cyclones and hurricanes [9] have been found to present graver risks to people with disabilities [10], women [11], racial minorities and the poorest members of society [12]. A self-perpetuating cycle of climate vulnerability and social injustice is thereby created in which those most affected by socioeconomic hardship and marginalization are most severely impacted by climate change and, in turn, see their adaptive capacity further reduced. Shue labels this "compound injustice" where the existence of an injustice lays the foundation for further injustice [13]. The inherent inequity in the manifestation of climate impacts is evident at both the global level, where Least Developed Countries and Small Island Developing States with limited economic resources face disproportionate climate loss and damage [14], and at the subnational level, where socioeconomic, cultural, and structural inequalities serve to exacerbate the climate vulnerability of particular groups and individuals [15].

The links between socioeconomic inequality, exclusion, and climate vulnerability pose important distributive and procedural justice questions, which the present chapter shall seek to elucidate to enable a critical examination of the international climate regime under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC). The additional intergenerational justice implications of climate change shall be considered, before exploring the relationship between climate justice and the enjoyment of fundamental human rights. The reference to human rights in the preamble of the Paris Agreement, celebrated as the first formal consecration of rights in an international climate change treaty [16], contains a further acknowledgment of the social justice dimensions of climate impacts. The perambulatory clause notably refers expressly to "*the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations*" [17] in recognition of the particular susceptibility of these groups to climate impacts and holds that States Parties should promote these rights alongside gender equality in climate action [18]. The fact that this acknowledgment appears only in one clause of the preamble and not within the legally binding main body of the treaty however is reflective of the ancillary status of human rights as safeguarding guidelines in climate action, as opposed to integrated obligations [19]. Exposing the gaps in the human rights protection available to particularly climate-vulnerable groups represents an important first step in the development of a more inclusive approach to climate justice that is capable of providing redress for the inherent social injustice of climate impacts.

24.2 Conceptualizing climate justice

24.2.1 The distributive injustice of vulnerability, loss and damage

Justice in the field of climate change is primarily framed in terms of global distribution, with reference to the disproportionate environmental burdens being borne by developing countries which are particularly vulnerable to the impacts of climate

change, yet are responsible for emitting comparatively low levels of greenhouse gases. Studies have demonstrated an inverse relationship between countries' level of greenhouse gas emissions and their vulnerability to climate change impacts, with many of the highest emitters being among the least vulnerable to adverse climate impacts, and vice versa [20]. This fundamental inequality is strikingly illustrated by Small Island Developing States, which it is estimated are responsible for less than 1% of global greenhouse gas emissions [21], yet face some of the severest threats from climate-induced sea-level rise and extreme weather events [22]. The relationship between exposure to climate change impacts such as temperature rises and socioeconomic vulnerability in developing countries [23] serves to further exacerbate this inequality. In order to explore the way in which distributive climate justice should be conceptualized in the present section, the origins and applicability of the concept of distributive justice will initially be explored, followed by the theoretical foundations of its application to climate change. The analysis will then turn to the way in which distributive justice has been concretely provided for within the international climate regime.

Distributive justice has its origins in Rawlsian concepts of distribution of social and economic inequalities [24], including the "difference principle" requiring that inequalities be distributed to the benefit of the least advantaged [25]. The term "inequalities" is defined broadly as encompassing both wealth and other "social goods" including civil liberties and institutional factors such as participation [26]. Although not originally conceived in either global or environmental terms, distributive justice has since formed one of the core pillars of environmental justice research, which has brought the relationship between environmental hazards and social justice into sharp focus. Originating in the United States as a social movement against the predominant placement of environmentally hazardous waste plants and polluting factories in minority ethnic communities [27], the movement has given rise to a substantial body of research exploring the way in which disproportionate environmental burdens are borne by marginalized, indigenous, and socioeconomically disadvantaged groups at both the subnational and global levels. Schlosberg describes distributive environmental justice as the exposition of how the distribution of environmental risk "mirrors the inequity in socio-economic and cultural status" [28]. This broad definition focusing on the interrelationship between risk and inequity has been further extrapolated to accommodate analyses of climate change as a complex global threat the environmental justice framework was not originally conceived to tackle.

In the context of global climate change, scholars including Shue and Caney have argued for a distributive approach to the conceptualization of climate justice based upon the redistribution of the burdens and costs of climate redress onto those who bear primary causal responsibility and are in the best economic position to bear them. Shue argues that climate justice should be founded upon fairness, with the distribution of burdens determined according to three core principles of equity, namely, the greatest contribution to the problem, the ability to pay, and the need to guarantee an adequate minimum of the resources necessary for a decent life to all [29]. Caney similarly examines climate change from the perspective of the global distribution of benefits and burdens and argues for a "hybrid" approach to the "polluter pays principle" based upon ability to pay with duties ascribed to those most able to pay to support the

construction of institutions to discourage noncompliance [30]. While Shue argues for the clear attribution of collective responsibility to states, Caney argues that a more nuanced and individualistic evaluation of the contributions of actors at different levels, including inter alia, corporations, individuals, and international institutions [31]. For the purposes of the present Chapter, a state-level analysis of responsibility for climate change, benefits, and burdens is adopted in line with the international climate regime. This global distributive approach is based upon the primary responsibility of developed, high-emitting states to redress the burdens facing climate-vulnerable developing states, determined according to the emissions data made available through national reporting of the UNFCCC States Parties and in consideration of their historical emissions responsibility [32].

The attribution of responsibility for climate change mitigation within the UN Framework Convention regime mirrors the distributive injustice inherent in the manifestation of climate impacts in requiring developed "Annex I" states parties to take the lead in adopting measures to curb emissions [33]. The legal foundation of this distinction is embodied in the common but differentiated responsibility principle contained in Article 3(1), which makes clear the distinction between the responsibility and capabilities of developed and developing country parties in addressing climate change. This principle continues to find expression in the Paris Agreement [34] despite the development of a more inclusive regime in which developing country parties are participating alongside developed countries in progressively more ambitious action towards the stabilization of emissions in line with the temperature goals [35], albeit in the form of voluntary Nationally Determined Contributions (NDCs) to be reviewed periodically [36].

The principal attribution of responsibility for climate mitigation to developed country parties is accompanied by a series of obligations to provide increasing levels of financial and technological support to climate-vulnerable developing countries both in adapting to climate impacts and in addressing the loss and damage being suffered. Within the UNFCCC regime, there exists a strong focus on strengthening the adaptive capacity of developing and climate-vulnerable States Parties. Primarily, this is provided for in the form of financial assistance from the UNFCCC's financial mechanism, the Green Climate Fund, established by the Cancun Agreements of 2010 [37]. Alongside the Green Climate Fund, the pre-existing Global Environment Facility, together with the Least Developed Countries Fund and Special Climate Change Fund it manages, provide additional support for the development of adaptation programs, technology transfer, capacity building, and development assistance in key sectors such as energy and agriculture in developing and least developed countries [38].

The Paris Agreement reinforced the need for developed country parties to "take the lead in mobilizing climate finance" [39] more ambitiously and to take into account the needs of those developing countries most vulnerable to the impacts of climate change, including the need for public funding in the form of grants [40]. These provisions are accompanied by a number of obligations to provide assistance in addressing the loss and damage suffered by climate-vulnerable States Parties on a "cooperative and facilitative" basis in the form of the enhancement of understanding

and support with aspects such as risk assessment and disaster preparedness [41]. The Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, since COP21 in 2015, further incorporates a Task Force on Displacement with the aim of gathering data and developing recommendations on the climate-induced displacement of communities [42]. It is worth noting that although the inclusion of considerations such as those of "noneconomic losses" and the "resilience of communities" as requiring enhanced understanding and action [43] evidence an increasing focus upon the social impacts of climate change, the fact that compensation and liability were expressly excluded from the loss and damage provisions in the Paris Agreement [44] is reflective of States Parties' continuing resistance to more concrete distributive measures.

In order to identify which states and communities are most vulnerable to climate change impacts, enabling targeted assistance to be provided to alleviate the disproportionate environmental burdens, climate vulnerability must first be conceptualized. The Intergovernmental Panel on Climate Change (IPCC) has authoritatively defined climate vulnerability, in reliance upon expert evidence from multidisciplinary sources, in terms of the susceptibility of a system to climate impacts. Susceptibility is measured with respect to the sensitivity of the system to climate impacts and its adaptive capacity [45]. Systems themselves are defined broadly as including those which are geophysical, biological, and socioeconomic [46], while adaptive capacity has been defined as the extent to which a system is able to accommodate and absorb the relevant impacts [47].

The IPCC definition, which has informed international climate policy making, has been primarily based upon the exposure of systems to the physical impacts of climate change and on the magnitude of the risk posed. It is important to underline at this juncture that climate vulnerability, although conceptualized at the global level to inform international law- and policy-making, is not uniformly experienced at the subnational level as a result of the social and economic factors influencing the vulnerability of particular groups and individuals [48]. Indeed, the IPCC definition has been the subject of critique for its failure to adequately take into account the underlying social causes and human aspects of vulnerability, such as inequality, which play a significant role in determining the resilience and adaptive capacity of individuals and groups [49].

In the fifth assessment report, the IPCC took note of the ongoing development of vulnerability as a "multidimensional" concept, with particular reference to the relationship between vulnerability and "structural conditions of poverty and inequality" [50]. This is reflective of the increased focus in climate change scholarship upon social vulnerability [51], defined for example in terms of entitlement to resources broadly conceived as including not only material income, but the institutional and social factors impacting upon an individual's access to resources [52]. Climate vulnerability, broadly conceived in this manner, has strong links to procedural climate justice in that it carves out a space for the consideration of the underlying barriers which inhibit both adaptive capacity, and the ability of nations, groups, and individuals to participate effectively in policy making and institutional processes.

24.2.2 Procedural injustice and climate change

Procedural justice is most often defined in terms of equal participation in decision-making processes. It has its roots in theories of deliberative democracy and procedural legitimacy, notably including the work of Habermas exploring the value of "ideal speech" involving all affected parties in decision-making processes legitimized by consensus [53]. This has been complemented by an increasing focus upon gender, ethnicity, and other sociocultural factors, which serve to restrict the effective participation of particular groups in institutional processes, with calls for more nuanced articulations of procedural justice capable of taking account of the impact of engrained inequalities [54]. This involves more than prima facie access to institutions or decision-making processes, it requires the consideration of the consequences of the imbalances of power or social domination, which may lead to the "internal exclusion" [55] of groups, who, although they have access to decision-making processes, do not have an equal voice or share in the power to influence their outcomes.

The environmental justice literature has primarily focused upon participation in environmental decision making and on the barriers to participation faced by marginalized communities [56], alongside more established distributive justice considerations. This definition should be further broadened to encompass the ability to challenge procedural exclusion, the denial of rights, and environmental decision making through legal and administrative means. Access to justice, although only scantly acknowledged as a core component of procedural environmental justice in the literature [57], is of great importance in guaranteeing respect for both the procedural and substantive rights of affected communities. Procedural justice itself is largely overlooked in the prevalent climate justice discourses, which focus upon distributive injustice in the form of the burdens disproportionately borne by climate-vulnerable developing nations [58], and upon intergenerational equity, calling for greater consideration of the impacts of climate change for future generations [59]. Limited examples of the consideration of procedural justice in the context of the UNFCCC regime have focused upon the legitimacy and fairness of the process, measured in terms of the equal participation of all affected States Parties and regions of the world in the negotiations and drafting [60]. Questions surrounding global participation and the legitimacy of the climate regime are of great importance; however, the limited nature of the consideration of procedural issues, both in the climate justice literature and within the regime itself, is too narrowly conceived to effectively cover the multifaceted challenges facing climate-vulnerable states and communities.

There are strong links to be drawn between climate vulnerability and procedural justice, as Adger (2006) observes, "vulnerable people and places are often excluded from decision-making and from access to power and resources" [61]; thus, it is important that policy responses take into account the underlying causes of vulnerability and tackle "marginalization as a cause of social vulnerability" [62]. The concept of marginalization is defined here as entailing exclusion from institutional structures and decision-making processes. The "under-researched" nature of representation in decision making in the vulnerability literature [63] is reflective of the neglect of procedural justice considerations in the UNFCCC regime more broadly.

The failure of the UNFCCC to adequately provide for procedural justice has been effectively critiqued from a normative standpoint in light of the principles of equity, which are stated as forming the basis of the regime and the absence of participation by many of the States Parties in its initial drafting [64]. The failure of the regime to provide procedural safeguards through representatives for future generations who will be impacted by climate change has also been the subject of some interesting critique [65]; however, procedural justice in this context can be seen once again to be narrowly defined as prima facie participation in the process itself. There is evidence of progress in terms of the inclusivity of the process, with climate vulnerable developing nations exerting effective influence with respect to key aspects of the Paris Agreement negotiations, for example by successfully lobbying for the inclusion of the 1.5°C ambition threshold for climate action [66] and with the 23rd Conference of the Parties presided over for the first time by a Small Island Developing State [67]. Associated provisions contained within the Paris and UNFCCC frameworks on, for example, knowledge sharing, public awareness, and encouraging participation generally, including of NGOs [68], do have procedural justice ends in making up-to-date information available to States Parties and the public, thereby facilitating more effective engagement. Other core aspects of procedural environmental justice however remain absent from the international framework, most notably access to justice.

24.2.3 Intragenerational equity

Intergenerational equity represents a widely recognized principle of international environmental law providing for the preservation of natural resources and the environment for the benefit of future generations. It has roots in the 1972 Stockholm Declaration [69] and forms a core tenet of sustainable development frameworks [70]. The UNFCCC embeds intragenerational equity within the international climate change regime as a founding principle. Article 3 frames the concept in terms of the need to "*protect the climate system for the benefit of present and future generations of humankind*" [71], which is reinforced by the inclusion of sustainable development as a further core principle within the UNFCCC framework [72]. The continuing relevance of intergenerational equity as a guiding principle shaping climate action is reaffirmed by the Paris Agreement preamble [73], yet its precise conceptualization and implementation measures, beyond the implicit benefits of climate mitigation for future generations generally, remain unclear. Intergenerational equity, despite being widely referred to in the discourse and instruments of international institutions [74], is often provided for in the form of nonbinding "soft law" or remains undefined and open to interpretation, as in the UNFCCC. The status of the principle before the courts is contested and it is observed by Bell, McGillivray et al. that the inherent difficulty in defining intergenerational equity means that it is very seldom invoked in judicial decisions [75].

In climate justice literature, there is widespread agreement on the importance of taking the needs and rights of future generations into account. Caney for example argues that intergenerational duties represent a core facet of global climate justice

due to the temporal dimension of climate change, which means that the adverse impacts of current greenhouse gas emissions will be experienced by future generations of people [76]. The way in which the principle should be defined and applied to climate change however lacks agreement. Brown Weiss has defined intergenerational equity in the form of three key principles of conservation, namely, of options, quality, and access [77]. These three principles, designed to protect natural resource diversity, the quality of the environment, and the ability of future generations to equitably access the benefits therefrom, are translated into the obligations to prevent and mitigate climate change, together with the obligation to provide adaptation assistance [78]. All three of these climate obligations can be found within the international climate change regime, which has established a warming threshold commensurate with the prevention of dangerous interference with the climate system, and ascribes mitigation and adaptation assistance obligations to developed nations.

It is however unclear which of the founding principles underpin each of these obligations or how the principles are being conceptualized. The application of liberal principles of fairness such as Rawls' "just savings" principle, described as "*an understanding between generations to carry their fair share of the burden of realizing and preserving a just society*" [79], whereby the present generation has a duty to save a "fair share" of resources for the next [80], has also been advocated for in the climate change context [81]. Attempts to fill the lacuna between principle and implementation have given rise to proposals for economic solutions in the form of "social discounting," based upon cost–benefit calculations of the value of acting to protect future generations. These contentious proposals and questions surrounding the values assigned to market, technological, and human factors have met with strong criticism on ethical grounds, including from fellow economists [82].

To what extent the interests of future generations should be provided for is itself a highly contested question and presents significant challenges, both ethically and legally. Some of the strongest critiques have argued that protecting future generations from climate impacts through stringent mitigation efforts is at the cost of improving the welfare of the present generation, particularly those living in poverty for whom resources are urgently required [83]. The false dichotomy between development and environmental protection has been particularly pervasive in the field of climate change, where, reinforced by a binary approach to common but differentiated responsibility, it has served to entrench the pre-Paris Agreement impasse on mitigation action between developed and high-emitting developing states [84]. A further common criticism of attempts to implement intergenerational equity and rights is the ability to identify the people to whom a duty is owed or by whom a right is held, known as the "non-identity problem" [85], discussed in greater detail in Section 24.3.3 below. The common factor in intergenerational approaches to climate change is their ambiguity in both the definition and application of the concept. Acknowledging these difficulties, it can pragmatically be argued that the best way to provide protection from adverse climate change impacts for future generations is to increase commitment to mitigation and overcoming social injustice in the present [86].

24.3 Linking climate justice and fundamental rights

24.3.1 Distributive climate justice and human rights

The impacts of anthropogenic climate change upon the enjoyment of a broad range of fundamental human rights are widely acknowledged by UN bodies including the Human Rights Council [87], the Office of the High Commissioner for Human Rights (OHCHR) [88], and the Special Rapporteur on Human Rights and the Environment [89]. The Human Rights Council has poignantly acknowledged that "*climate change poses an immediate and far-reaching threat to people and communities around the world and has adverse implications for the full enjoyment of human rights*" [90]. Climate change, both through direct impacts, including extreme weather events and temperature increases, and indirect impacts, such as food and water insecurity, has adverse consequences for the enjoyment of a broad range of civil, political, economic, social, and cultural rights. Climate change increases rates of mortality, disease and malnutrition, threatening the right to life and the right to health [91], while other impacts have been shown to jeopardize the rights to self-determination and an adequate standard of living, including inter alia, the rights to adequate food and housing [92]. The extent to which these human rights are threatened depends upon both the vulnerability of the individuals to climate change, defined in terms of their exposure and adaptive capacity, and upon the socioeconomic and cultural factors which underpin capacity and susceptibility to harm, including the enjoyment of rights.

In addition to the two core covenants on civil and political rights (ICCPR) and socioeconomic and cultural rights (ICESCR), international human rights law provides specialized instruments, treaty bodies, and complaints mechanisms for the rights of women under the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), for people with disabilities under the Convention on the Rights of Persons with Disabilities (CRPD), and for children under the Convention on the Rights of the Child (CRC). All of these groups have independently been found to be particularly vulnerable to the impacts of climate change and disasters [93], while socioeconomic factors and the marginalization they encounter already serve to render them more susceptible to harm and abuse [94]. The enjoyment of fundamental human rights of these particularly susceptible groups is therefore subject to compound threats. Climate-related loss and damage can augment other threats; studies in the Pacific for example have shown that women are far more likely to suffer from violence and abuse in the aftermath of a disaster [95]. Indigenous peoples also experience greater vulnerability to climate change impacts and human rights threats, both as a result of the exposure of the regions they inhabit, and their increased dependency upon natural resources for livelihoods and cultural practices [96].

Established distributive climate justice debates center principally upon the need to address the disproportionate burdens borne by particularly climate-vulnerable states. Distributive injustice is nevertheless evident at multiple scales, subnationally it is found in the inequitable distribution of harms to vulnerable groups. The strong links established between social injustice, marginalization, poverty, and vulnerability to

climate change impacts underpin the need to guarantee a minimum level of protection for fundamental rights. This has been framed in the climate justice literature as the need to guarantee an "adequate minimum" of the resources required for a decent life [97] and as securing minimum moral thresholds [98]. These moral arguments pair naturally with existing human rights as legally consecrated mechanisms for the enforcement of such standards, leading some scholars to invoke the rights to life, health, subsistence, and physical security [99] as the basis of duties to alleviate disproportionate climate burdens. The increasing focus upon the human rights impacts of climate change in research and policy responses however has not led to the integration of rights into the international mechanisms designed to provide redress for climate burdens, including notably, the Warsaw Mechanism on Loss and Damage [100].

24.3.2 Developing links between procedural justice, rights, and climate change

The relationship between climate vulnerability, social marginalization, and structural exclusion, discussed in Section 24.2.2, has significant implications for the enjoyment of fundamental rights. Factors such as discrimination on the grounds of gender and disability have been found to reinforce climate vulnerability [101] while, in turn, climate change is likely to exacerbate the socioeconomic factors already restricting the access of climate-vulnerable groups to decision-making processes and legal redress. Indigenous communities who are particularly vulnerable to climate change impacts for example often face marginalization and exclusion from decision-making processes [102]. The mutually reinforcing factors of procedural exclusion and climate vulnerability call for the firm integration of procedural rights into the climate framework with provision made for corresponding implementation programs at the national level. International human rights law contains a number of provisions safeguarding democratic participation [103], the pursuit of information [104], and rights to an effective remedy [105] capable of forming the foundations for procedural climate justice. The International Covenant on Civil and Political Rights (ICCPR) further provides in Article 2 that the rights within it shall be guaranteed without distinction on any grounds including, inter alia, "*race, colour, sex… national or social origin, property, birth or other status*" [106] comprising a prohibition of the type of discrimination found to increase vulnerability to climate change. Similar nondiscrimination provisions are established in respect of socioeconomic rights in ICESCR [107], the rights of women in CEDAW [108], and the rights of persons with disabilities in CRPD [109].

The importance of procedural justice guarantees in developing an effective response to climate change capable of providing concrete protections to those communities and individuals most vulnerable to its impacts should not be underestimated. The procedural justice safeguards in the UNFCCC regime at present provide for the rights of States Parties to vote [110] and for bodies and agencies to participate as observers in the negotiations [111]. Article 6 of the UNFCCC provides that States Parties should "promote and facilitate" public access to information and participation in a general provision on education and awareness. The climate regime additionally

contains knowledge sharing and enhanced understanding provisions [112], which serve to provide for the availability of essential climate information for adaptation and mitigation action. The Paris Agreement with respect to adaptation measures provides that the actions taken by States Parties should be "gender-responsive, participatory, and fully transparent" taking into account vulnerable groups and indigenous knowledge [113]. These provisions provide for prima facie participation and access to information at the international level; however, concrete measures to uncover the underlying barriers to participation and access to justice encountered by the most climate-vulnerable groups and the requisite strategic support for this are absent. Increasingly, human rights bodies and experts at the international level are recognizing the importance of the integration of procedural guarantees for the benefit of securing increased human rights protection [114], yet this has not led to the development of an effective rights-based response by the UNFCCC.

24.3.3 Rights of future generations?

The status of intergenerational equity as a longstanding principle within the UNFCCC [115] and a much-debated facet of climate justice has not yet led to the establishment of any legal rights for future generations, either within or outside of the international climate regime. Developing precise rights or duties for the benefit of future generations involves first overcoming the challenges to their establishment, the most commonly cited of which is the so-called nonidentity problem. The nonidentity problem, articulated by Parfit [116], is premised upon the birth of future people being determined by present actions, meaning that changes in behavior now will necessarily affect the conception and birth of particular individuals. The core assumption is that if it is not possible to determine which specific individuals will be born, it is not possible to assign rights or owe duties to them. It is correspondingly considered to be impossible to harm specific future individuals by way of current actions, unless the argument can be made that they would be better off not existing at all [117]. These conceptual challenges to the establishment of rights for future generations are reinforced by the legal challenges associated with the attribution of responsibility for harm and the enforceability of rights.

The consecration of fundamental human rights in law has important ramifications in terms of enforceability for the individuals affected. The individualistic nature of current human rights laws however inherently restricts their intergenerational and transboundary scope as individuals must be able to prove the existence of an immediate threat or demonstrable harm in respect of the enjoyment of their rights, and to establish a causal link to the acts or omissions of the state, primarily with territorial jurisdiction [118]. In the absence of either the establishment of new rights, such as a right to an equitable share of ecological space [119] or a right to subsistence emissions [120], or the development of more liberal legal doctrines of "extrajurisdictional duties" [121] and legal standing for future generations [122] for the purposes of exercising legal rights, concrete enforceability will remain limited.

A number of scholars have nevertheless presented convincing ethical arguments for the allocation of legal rights to protect future generations from climate change

[123]. The most compelling of these arguments rests upon the foreseeability of harm arising in the future as a result of the failure of the present generation to mitigate the effects of anthropogenic climate change. This shifts the focus away from the identification of specific individuals, to the universality of the fundamental rights owed to future people, whomever they may be, as human beings [124]. Dietzel has convincingly argued, based upon a cosmopolitan assumption of the equal moral worth of individuals, that as the time at which a person is born is determined by chance, it should have no moral bearing upon the entitlements of the individual, so the rights of future people should be considered of equal worth to those of the present [125]. This underlying moral assumption ties in closely both with the overarching aims of the international human rights framework to provide for the "*inherent dignity and […] the equal and inalienable rights of all members of the human family*" [126], and, indeed, of the UNFCCC to protect the climate system for the benefit of present and future generations [127].

24.4 Conclusion

This chapter has outlined the need to move beyond purely distributive conceptions of climate justice in order to effectively accommodate the complex underlying social injustices, which serve to render particular groups more vulnerable to adverse climate change impacts. Renewed efforts to integrate procedural justice into climate law- and policy-making are called for, with a strong focus upon barriers to participation, access to information, and access to justice at the subnational level, where climate-vulnerable groups will suffer most acutely from the impacts of compound socioeconomic and climate injustice. Fundamental human rights, as minimum moral standards for the protection of human life, dignity, and equality, should form the bedrock of the climate justice framework informing future action. In light of the theoretical and legal challenges associated with the granting of rights to future generations, and given the need for substantial legal reform, it is argued that the interests of future generations are best served by establishing a strong climate justice framework to guide action in the present.

Substantive rights to life, health, and an adequate standard of living can form the basis of measures to address the disproportionate loss and damage being suffered by climate-vulnerable groups, providing a minimum level of protection beneath which the international community's response, and states' national measures as the principal actors within it, should not be allowed to fall. Procedural justice safeguards similarly find reinforcement in human rights provisions for legal remedies, democratic participation, and nondiscrimination in the exercise of fundamental rights, which can offer guidance in the implementation of measures designed to tackle the underlying social justice barriers to essential procedural engagement, particularly access to justice as a neglected component of international climate responses. The reference made to the rights of indigenous communities, children, persons with disabilities, and other climate-vulnerable groups in the Paris Agreement preamble represents a tentative first step toward the integration of human rights and social injustice into the climate

framework. More focused efforts are however required to meaningfully address the underlying socioeconomic injustices, and the procedural barriers which serve to reinforce them at the subnational level, if climate justice is truly to be attained.

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Guiding Principles on Shared Responsibility in International Law

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Abstract

It is common in international practice that several states and/or international organizations contribute together to the indivisible injury of a third party. Examples thereof are aplenty in relation to climate change and other environmental disasters, joint military activities and cooperative actions aimed at stemming migration. Such situations are hardly captured by the existing rules of the law of international responsibility. In particular, the work of the International Law Commission, which is widely considered to provide authoritative guidance for legal questions of international responsibility, has little to offer. As a result, it is often very difficult, according to the existing rules of the law of international responsibility, to share responsibility and apportion reparation between the states and/or international organizations that contribute together to the indivisible injury of a third party. The Guiding Principles on Shared Responsibility in International Law seek to provide guidance to judges, practitioners and researchers when confronted with legal questions of shared responsibility of states and international organizations for their contribution to an indivisible injury of third parties. The Guiding Principles identify the conditions of shared responsibility (including questions

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of multiple attribution of conduct), the consequences of shared responsibility (notably, the possibility of joint and several liability) and the modes of implementation of shared responsibility. The Guiding Principles are of an interpretive nature. They build on the existing rules of the law of international responsibility and sometimes offer novel interpretations thereof. They also expand on those existing rules, backed by authoritative practice and scholarship, to address complex questions of shared responsibility.

1 Text of the Guiding Principles on Shared Responsibility in International Law

Part I: Determination of Shared Responsibility

Principle 1

Use of terms

For purposes of the present Guiding Principles:

(a) 'international person' means a state or international organization;
(b) 'person' means an international actor, including an international person;
(c) 'injury' means material and non-material damage, and does not include legal injury;
(d) 'contribution to injury' means a causal relationship between conduct and injury.[8]

Principle 2

Shared responsibility of international persons

1. The commission by multiple international persons of one or more internationally wrongful acts that contribute to an indivisible injury entails shared responsibility.
2. Contribution to an indivisible injury may be individual, concurrent or cumulative.

Principle 3

Shared responsibility arising from a single internationally wrongful act

International persons share responsibility for a single internationally wrongful act when the same conduct consisting of an action or omission:

[8] The Advisory Board was composed of Dov Jacobs (chair), Helmut Aust, Kristen Boon, Pierre d'Argent, Markos Karavias, Simon Olleson and Christian Tams. The Guiding Principles are based on the research carried out on shared responsibility in international law in the period 2010–2016 at the University of Amsterdam, funded by an Advanced Grant by the European Research Council granted to André Nollkaemper. The authors of the Guiding Principles are grateful to all those who have over the years contributed to the project. The Drafting Committee on the Guiding Principles on Shared Responsibility in International Law benefited from the research support of Emilie van den Hoven.

(a) is attributable to multiple international persons; and
(b) constitutes a breach of an international obligation for each of those international persons; and
(c) contributes to the indivisible injury of another person.

Principle 4

Shared responsibility arising from multiple internationally wrongful acts

International persons share responsibility for multiple internationally wrongful acts when each of them engages in separate conduct consisting of an action or omission that:

(a) is attributable to each of them separately; and
(b) constitutes a breach of an international obligation for each of those international persons; and
(c) contributes to the indivisible injury of another person.

Principle 5

Circumstances precluding wrongfulness in situations of shared responsibility

1. Each of the international persons that contributed to the indivisible injury of another person may invoke a circumstance precluding wrongfulness under the rules of international responsibility.
2. A circumstance precluding wrongfulness invoked by an international person that contributed to the indivisible injury of another person does not as such preclude the wrongfulness of the conduct of other international persons that contributed to the indivisible injury.
3. The invocation of a circumstance precluding wrongfulness is without prejudice to the question of compensation for any material loss caused by the act(s) in question.

Part II: Specific Situations of Shared Responsibility Arising from Multiple Internationally Wrongful Acts

Principle 6

Shared responsibility in situations of aid or assistance

1. An international person shares responsibility when it knowingly aids or assists another international person in committing an internationally wrongful act, and the conduct of each of those international persons contributes to the indivisible injury of another person.
2. The requirement of knowledge in paragraph 1 is satisfied when an international person knew or should have known the circumstances of the internationally wrongful act.
3. An international person shares responsibility pursuant to paragraph 1 if the act would have been internationally wrongful if committed by that international person.

Principle 7

Shared responsibility in situations of concerted action

1. An international person shares responsibility when it knowingly acts in concert with another international person that commits an internationally wrongful act, and the conduct of each of those international persons contributes to the indivisible injury of another person.
2. International persons act in concert when each of them participates in a course of conduct with a view to achieving agreed goals.
3. The requirement of knowledge in paragraph 1 is satisfied when an international person knew or should have known the circumstances of the internationally wrongful act.
4. An international person shares responsibility pursuant to paragraph 1 if the act would have been internationally wrongful if committed by that international person.

Principle 8

Shared responsibility in situations of control

1. An international person shares responsibility when it knowingly controls another international person in committing an internationally wrongful act, and the conduct of each of those international persons contributes to the indivisible injury of another person.
2. 'Control' for purposes of paragraph 1 includes situations of direction and control, acts of international organizations and coercion.
3. The requirement of knowledge in paragraph 1 is satisfied when an international person knew or should have known the circumstances of the internationally wrongful act.
4. Except in situations of coercion, an international person shares responsibility pursuant to paragraph 1 if the act would have been internationally wrongful if committed by that international person.

Part III: Content of Shared Responsibility

Principle 9

Cessation and non-repetition in situations of shared responsibility

1. Each international person sharing responsibility is under an obligation:
   (a) to cease the act attributable to it, if this act is continuing;
   (b) to offer appropriate assurances and guarantees of non-repetition, if circumstances so require.
2. Each responsible international person is under an obligation to ensure that other responsible international persons fulfil their obligations pursuant to paragraph 1.

Principle 10

Reparation in situations of shared responsibility

Each international person sharing responsibility is under an obligation to make full reparation for the indivisible injury caused by the single or multiple internationally wrongful acts, unless its contribution to the injury is negligible.

Principle 11

Forms of reparation in situations of shared responsibility

1. Full reparation for the indivisible injury caused shall take the form of restitution, compensation and satisfaction, either singly or in combination.
2. When one or more of the responsible international persons is under an obligation to make restitution, each of the other responsible international persons are under an obligation to ensure that restitution is made.
3. In so far as the damage is not made good by restitution, each of the responsible international persons is under an obligation to compensate for the indivisible injury caused.
4. When full reparation entails an obligation to give satisfaction, this obligation is owed by each of the responsible international persons.

Principle 12

Right of recourse

1. An international person that has made full reparation for an indivisible injury has a right of recourse against all other international persons that share responsibility for that injury.
2. When an international organization shares responsibility with other international persons, this Principle is without prejudice to the rules of that organization.

Principle 13

Shared responsibility for serious violations of a peremptory norm of general international law

1. When multiple international persons commit one or more internationally wrongful act(s) that constitute a serious breach of an obligation arising under a peremptory norm of general international law and contribute to an indivisible injury, all other international persons are under an obligation:
   (a) to cooperate to bring to an end the serious breach, and
   (b) to not recognize as lawful a situation created by the serious breach, nor render aid or assistance in maintaining that situation.
2. For the purpose of paragraph 1, multiple internationally wrongful acts may cumulatively constitute a serious breach of an obligation arising under a peremptory norm of general international law resulting in an indivisible injury.

Part IV: Implementation of Shared Responsibility

Principle 14

Invocation of shared responsibility

1. An injured international person is entitled to invoke the responsibility of each of the international persons that share responsibility.
2. An international person other than the injured international person is entitled to invoke the responsibility of each of the international persons that share responsibility if the obligation breached is owed to a group of international persons that includes that international person or to the international community as a whole.
3. An injured person that is not an international person is entitled to invoke the responsibility of each of the responsible international persons that share responsibility if the obligation breached is owed to that person individually.

Principle 15

Countermeasures in situations of shared responsibility

An international person entitled under the rules of international responsibility to take countermeasures may take such measures against each of the international persons that share responsibility.

2 Text of the Guiding Principles on Shared Responsibility in International Law and Commentaries Thereto

Introduction

The Guiding Principles on Shared Responsibility in International Law provide guidance to judges, practitioners and researchers when confronted with legal questions of shared responsibility of states and international organizations. The Principles are of an interpretive nature as they substantiate the existing rules of the law of international responsibility reflected in the Articles on the Responsibility of States for Internationally Wrongful Acts (ARSIWA)[9] and the Articles on the Responsibility of International Organizations (ARIO),[10] which were adopted by the International Law Commission (ILC) in 2001 and 2011, respectively. In particular, they build on the rules in the ARSIWA that address situations of shared responsibility of states and, as far as the shared responsibility of international organizations is concerned, on the

[9] Articles on the Responsibility of States for Internationally Wrongful Acts (ARSIWA), UN Doc. A/56/10, 2(2) *ILC Yearbook* (2001) 26; Articles on the Responsibility of States for Internationally Wrongful Acts with Commentaries Thereto (Commentaries to the ARSIWA), UN Doc. A/56/10, 2(2) *ILC Yearbook* (2001) 31.

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excluding legal injury are that the Principles limit the scope of shared responsibility to indivisible injury (Principle 2) and that one of the main legal consequences of shared responsibility is the obligation of each international person sharing responsibility to make full reparation for the indivisible injury (Principle 10). Such an obligation cannot arise as a result of legal injury alone, considering that legal injury does not give rise to an obligation of reparation.[18] This definition of injury is without prejudice to the situation where the conduct of multiple international persons results solely in legal injury and engages their international responsibility.

5. Principle 1, subparagraph (d), clarifies that 'contribution to injury' means a causal relationship between conduct and injury.[19] Different tests exist to establish such a causal relationship. No specific test of causation is prescribed by international law.[20] The Principles do not seek to impose a general test of causation between conduct and injury that would define when a particular conduct does or does not constitute a contribution to injury for all situations of shared responsibility. Yet they do provide guidance on the possible ways in which the causal relationship between conduct and injury can be established in situations of shared responsibility – in particular, with a view to apprehending multiple contributions to the same injury.

Principle 2
Shared responsibility of international persons

1. The commission by multiple international persons of one or more internationally wrongful acts that contribute to an indivisible injury entails shared responsibility.
2. Contribution to an indivisible injury may be individual, concurrent or cumulative.

Commentary

1. Principle 2, paragraph 1, sets forth in which situations shared responsibility for the purpose of the Principles arises. Shared responsibility refers to situations in which two or more international persons share responsibility

International Responsibility Today: Essays in Memory of Oscar Schachter (2005) 93; Barboza, 'Legal Injury: The Tip of the Iceberg in the Law of State Responsibility?', in Ragazzi, *ibid.*, 7.

18 This is consistent with the notion of injury in Art. 31 ARSIWA, which does not include legal injury.

19 The notion of contribution to injury as used in these Principles differs from the notion of contribution to injury by wilful or negligent action or omission of the injured international person, as found in Arts 39 ARSIWA and ARIO.

20 D. Pusztai, *Causation in the Law of State Responsibility* (2017) (PhD dissertation on file at the University of Cambridge), at 112; Gattini, 'Breach of International Obligations', in A. Nollkaemper and I. Plakokefalos (eds), *Principles of Shared Responsibility in International Law: An Appraisal of the State of the Art* (2014) 25, at 30–31.

for their contribution to an indivisible injury of third persons. The defining feature of shared responsibility is that multiple international persons, by committing one or more internationally wrongful acts, contribute to an indivisible injury. Shared responsibility may arise from collective conduct, in situations in which international persons engage in cooperation, such as in multinational military operations, or from independent conduct, such as multiple states independently contributing to environmental harm.[21]

2. All situations of shared responsibility involve the commission of one or more internationally wrongful acts. The Principles follow the definition of an internationally wrongful act in the law of international responsibility. An internationally wrongful act consists of conduct that is attributable to an international person and in breach of an international legal obligation of that international person. The existence of both elements – that is, attribution of conduct and breach – is determined in accordance with the existing rules of the law of international responsibility, especially Articles 4–11 of the ARSIWA and Articles 6–9 of the ARIO. A contribution to an indivisible injury that does not involve a breach of an applicable international obligation does not give rise to shared responsibility.
3. Principle 2, paragraph 1, stipulates that international persons only share responsibility when they contribute to an *indivisible injury* of another person. This Principle delimits the scope of the complex cases that the Principles address. One or more internationally wrongful acts that do not contribute to an indivisible injury do not fall within the scope of the present Principles. For the purposes of the present Principles, responsibility is only shared when one or more wrongful acts contribute to an indivisible injury.
4. International persons thus do not share responsibility pursuant to these Principles when they contribute to an injury that is *divisible*. An injury is divisible when contributions to that injury can be distinguished from each other by using a factual test of causation. This will be the case when an internationally wrongful act qualifies as the single necessary and sufficient cause of a certain injury: that injury would not have occurred but for the wrongful act (hence, it was necessary), and the wrongful act was sufficient on its own to bring about that injury. In such a situation, the international person committing that internationally wrongful act would not incur *shared* responsibility but *independent* international responsibility. Such independent responsibility would be established under the generally accepted rules of international responsibility.[22]

[21] Commentary to Art. 47 ARSIWA, para. 8.

[22] Commentary to Chapter IV of Part One, ARSIWA, para. 1 ('[t]he principle that State responsibility is specific to the State concerned underlies the present articles as a whole').

5. Principle 2, paragraph 2, sets out that an indivisible injury resulting from the conduct of multiple international persons can arise in three types of situations: in the case of an *individual contribution*, in which a single contribution caused the injury by itself; in the case of *concurrent contributions*, in which each of the contributions could have caused the injury by itself; and in the case of *cumulative contributions*, in which the conduct of multiple international persons together results in an injury that none could have caused on their own.[23]
6. *Individual* contribution to injury covers situations in which one contribution that is attributable to multiple international persons is sufficient to cause the injury on its own. An example can be found in the situation addressed in the *Certain Phosphate Lands in Nauru* case before the International Court of Justice (ICJ), where the conduct of the Administering Authority established by Australia, New Zealand and the United Kingdom (UK) that damaged phosphate lands in Nauru was attributable to each of the three states.[24] Another example can be taken from the facts of the *Gabčíkovo-Nagymaros* case. The system of barrages originally planned jointly by Hungary and Czechoslovakia involved a project intended to be jointly implemented by two upstream riparian states. Had such a joint act resulted in harm to one or more of the downstream co-riparian states, including Serbia, Croatia, Bulgaria, Romania, Moldova and Ukraine, this could have constituted an individual contribution to an indivisible injury.[25]
7. *Concurrent* contributions to injury concern situations in which each of the respective acts or omissions of multiple international persons would have been sufficient to cause the injury. In order to identify such concurrent contributions that engage shared responsibility, a test of causal sufficiency can be applied. In contrast, the 'but-for' test of causation is not helpful for identifying concurrent contributions since 'but for' one of the contributions, the injury would still have occurred.[26] If, for instance, in the context of operations carried out by Iraq and the coalition against the Islamic State led by the USA, both the USA and Iraq were to simultaneously bomb a civilian hospital in Syria, each of these actions would have been sufficient to cause the injury and would therefore qualify as a concurrent contribution to an indivisible

[23] Similar distinctions have been formulated in scholarship. See, e.g., H.L.A. Hart and T. Honoré, *Causation in the Law* (2nd edn, 1985), ch. VI, at 205–253; B. Stern, *Le préjudice dans la théorie de la responsabilité internationale* (1973), Titre III, at 265–296; Pusztai, *supra* note 20, at 180–187; see also Third Report on State Responsibility, by Mr James Crawford, Special Rapporteur, UN Doc. A/CN.4/507 and Add.1–4, 2(1) *ILC Yearbook* (2000) 3, para. 31.

[24] *Certain Phosphate Lands in Nauru (Nauru v. Australia)*, Preliminary Objections, 26 June 1992, ICJ Reports (1992) 240, paras 45–47.

[25] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, 25 September 1997, ICJ Reports (1997) 7. See McIntyre, 'Transboundary Water Resources', in A. Nollkaemper and I. Plakokefalos (eds), *The Practice of Shared Responsibility in International Law* (2017) 905.

[26] Pusztai, *supra* note 20, at 190; Plakokefalos, 'Causation in the Law of State Responsibility and the Problem of Overdetermination: In Search of Clarity', 26 *European Journal of International Law* (*EJIL*) (2015) 471, at 477.

injury.[27] In another example, in 2011, a boat with 72 persons on their way to the Italian island of Lampedusa ran out of fuel and drifted along the Libyan shore before washing up 16 days later with only 11 survivors.[28] As several states, including Italy and Malta, had boats in the sea area at the time and received distress signals, it could be argued that both states were in a position to take action and could be held responsible for their omission to act. Their concurrent failures to attempt rescue would each have been sufficient to produce the indivisible injury.

8. *Cumulative* contributions to injury refer to the wide variety of situations in which multiple internationally wrongful acts accumulate and jointly produce an injury. In the *Corfu Channel* case,[29] 'the laying of the minefield … could not have been accomplished without the knowledge of the Albanian Government',[30] thus the laying of the mines and Albania's failure to warn British Royal Navy ships of the presence of these mines together resulted in the injury. Similarly, under the case file system within the framework of the Berne Convention on European Wildlife and Natural Habitats,[31] the Convention Secretariat addressed the planned construction of a tourist resort in a Moroccan national park that threatened the habitat of a bird species that was protected under the Convention. Not only did it find Morocco's planned construction to be in breach of the Convention, it also expressly took the position that the funding provided by France for the tourist resort would engage the international responsibility of the latter state.[32] If the actual construction of such a tourist resort had indeed destroyed the habitat of this endangered bird, the internationally wrongful acts of both states would have jointly produced the injury. In the case of climate change, the failure of a state to reduce carbon dioxide emissions in line with its international obligations may not be sufficient on its own to cause adverse global warming, but the combined failure to reduce carbon dioxide emissions of many states can result in such an indivisible injury.[33] The same can be said about the failure of multiple states to take necessary conservation measures with regard to their nationals engaged in fishing of fish stocks in the high seas, which results in stock depletion.[34]

[27] This corresponds, in causation theory, to the classical example of the hunting cross-fire accident where multiple bullets concurrently hit and cause the death of a victim (see *Summers v. Tice*, 33 Cal. 2d 80, 199 P. 2d 1 (1948)).

[28] Forensic Oceanography, Report on the 'Left-To-Die Boat', 11 April 2012.

[29] *Corfu Channel Case (United Kingdom v. Albania)*, Merits, 9 April 1949, ICJ Reports (1949) 4.

[30] *Ibid.*, at 22.

[31] Convention on the Conservation of European Wildlife and Natural Habitats 1979, ETS no. 104.

[32] Trouwborst, 'Nature Conservation', in Nollkaemper and Plakokefalos, *Practice of Shared Responsibility*, *supra* note 25, 987, at 1006.

[33] Peel, 'Climate Change', in Nollkaemper and Plakokefalos, *Practice of Shared Responsibility*, *supra* note 25, 1009, at 1010 and 1032.

[34] Takei, 'Fisheries', in Nollkaemper and Plakokefalos, *Practice of Shared Responsibility*, *supra* note 25, 350, at 353–354; Molenaar, 'Unregulated Deep-Sea Fisheries: A Need for a Multi-Level Approach', 19(3) *International Journal of Marine and Coastal Law* (2004) 223, at 227–228.

9. In situations of cumulative contributions, it will have to be determined which conduct constitutes a contribution that engages international responsibility. Various tests have been devised to determine cumulative causes[35] and could be used for this purpose. One such test considers a course of conduct to be a contribution that engages responsibility when it constitutes a material contribution to the injury.[36] An international person accordingly materially contributes to injury when its 'wrongful conduct played a more than minimal role in a mechanism which was causally sufficient for the claimant's damage'.[37] An alternative test to identify cumulative contributions giving rise to shared responsibility examines whether, together with the contributions of other international persons, a course of conduct is part of a jointly sufficient set of contributions.[38] An application of this test may be found in the reasoning of the Arbitral Tribunal in the *Naulilaa* case, which concerned a claim for reparation following a German offensive in a Portuguese colony. Portugal claimed compensation for damage to livestock and military equipment, and for increased costs, due to the haste with which it had to launch a counter-offensive. However, Germany refuted that this damage would have occurred independently of its offensive.[39] The Arbitral Tribunal held that the German act of aggression caused Portugal to accelerate and redirect its forces, and, therefore, the damage resulted from the combined effect of the acceleration by Portugal and the aggression by Germany.[40] Another possible illustration is Albania's contribution to the UK's injury in the *Corfu Channel* case,[41] which can be analysed in terms of jointly sufficient contributions. The injury 'was caused both by the action of a third State in laying the mines and the action of Albania in failing to warn of their presence', and '[b]oth are efficient causes of the injury, without which it would not have occurred'.[42]

35 See examples given in Plakokefalos, 'Causation', *supra* note 26.

36 See Pusztai, *supra* note 20, at 253–254 (stating that the internationally wrongful act should have contributed to the occurrence of the injury and that such contribution was major, not marginal, and also noting that this rule is supported by the jurisprudence of human rights courts, the UN Compensation Commission and the Eritrea-Ethiopia Claims Commission).

37 Steel, 'Causation in English Tort Law: Still Wrong after All These Years', 31 *University of Queensland Law Journal* (2012) 243, n. 3.

38 This is similar to the so-called NESS test (requiring that a course of conduct is a necessary element in a jointly sufficient set of contributions); see, e.g., Wright, 'Causation in Tort Law', 73(6) *California Law Review* (1985) 1735, at 1788–1802; Pusztai, *supra* note 20, at 110; Plakokefalos, 'Causation', *supra* note 26, at 477. A comparable test (the INUS test) enquires whether a contribution is an insufficient but necessary element of an unnecessary but sufficient set. J.L. Mackie, *The Cement of the Universe: A Study of Causation* (1974), at 59–87.

39 *Responsabilité de l'Allemagne en raison des actes commis postérieurement au 31 juillet 1914 et avant que le Portugal ne participât à la guerre (Portugal contre Allemagne) (Naulilaa)*, Decision, 30 June 1930, reprinted in UNRIAA, vol. 2 (2006) 1035, at 1069.

40 *Ibid.*, at 1071; Plakokefalos, 'Causation', *supra* note 26, at 487.

41 *Corfu Channel Case*, *supra* note 29.

42 Third Report on State Responsibility, *supra* note 23, para. 31.

10. Situations of aid or assistance, concerted action and control, as they are addressed in Part II of the present Principles, often consist of an accumulation of acts or omissions that jointly produce the injury. For instance, in the *El-Masri* case before the European Court of Human Rights (ECtHR),[43] agents of Macedonia handed El-Masri over to agents of the US Central Intelligence Agency, who subsequently subjected him to torture and ill-treatment. Though the Court only expressed itself on the wrongful conduct of Macedonia, on the basis of the information available on the conduct of the USA it can be said that the conduct of Macedonia and the USA together produced the indivisible injury. Similarly, in the case of *Omar Awadh* before the East African Court of Justice, the applicants alleged that they were arrested in Kenya, illegally detained and transferred without any formal extradition process to Uganda where they were arraigned on charges of terrorism and tortured by the authorities.[44]
11. Principle 2 also covers situations that involve a combination of cumulative and concurrent contributions. An example would be when the contributions of 15 states are jointly sufficient to cause marine pollution, resulting in the extinction of a particular species. Additional pollution by five other states can be seen as not necessary in light of the other contributions that were jointly sufficient to cause the species extinction. However, in the absence of some of the contributions of the 15 original polluters, the contributions of the latter five states *could have been* necessary within the jointly sufficient set of contributions.[45] In the case of climate change, individual failures to reduce carbon dioxide emissions can also be analysed in these terms. The inclusion of such supplementary contributions in the scope of shared responsibility is premised on the idea that an international person having committed an internationally wrongful act contributing to an injury should not be able to escape shared responsibility simply because others have already contributed to the same injury.

Principle 3

Shared responsibility arising from a single internationally wrongful act

International persons share responsibility for a single internationally wrongful act when the same conduct consisting of an action or omission:

[43] ECtHR, *El-Masri v. Former Yugoslav Republic of Macedonia*, Appl. no. 39630/09, Judgment of 13 December 2012.

[44] EACJ, *Omar Awadh Omar v. Attorney General Republic of Kenya, The Attorney General of the Republic of Uganda and the Secretary General of the East African Community*, Appl. no. 4, Decision on Jurisdiction, 1 December 2011.

[45] Pusztai, *supra* note 20, at 186 (defining contributory causation as a situation in which 'a factor is neither necessary, nor sufficient for the occurrence of the injury, but it nevertheless made a contribution to its occurrence and it could have theoretically caused the injury as a cumulative cause in a sufficient combination of causes').

and to maintain public order around the Coquelles terminal on French territory. Other examples may be found in the practice of wrongful extradition by one state to another state where an individual will be subjected to treatment contrary to international human rights law.[159] In *Israil v. Kazakhstan*, the Human Rights Committee requested Kazakhstan 'to put in place effective measures for the monitoring of the situation of the author of the communication, in cooperation with the receiving State [China]',[160] and in *Kalinichenko v. Morocco*, the Committee against Torture urged Morocco to establish 'an effective follow-up mechanism to ensure that the complainant is not subjected to torture or ill-treatment' in Russia.[161] Finally, in *Ng v. Canada*, the Human Rights Committee requested Canada to 'make such representations as might still be possible to avoid the imposition of the death penalty and appeals to the [USA] to ensure that a similar situation does not arise in the future'.[162]

Principle 10

Reparation in situations of shared responsibility

Each international person sharing responsibility is under an obligation to make full reparation for the indivisible injury caused by the single or multiple internationally wrongful acts, unless its contribution to the injury is negligible.

Commentary

1. Principle 10 provides that each international person sharing responsibility has an obligation to provide full reparation for the indivisible injury caused by all of them. An obligation to provide full reparation entails an obligation to 'wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed'.[163] Principle 10 extends this obligation, as codified in Articles 31 of the ARSIWA and the ARIO, to an injury caused by multiple responsible international persons.
2. Under Principle 10, the shared obligation to provide full reparation is borne equally by each of the responsible international persons. This indicates that

[159] See Constantinides, 'Extradition', in Nollkaemper and Plakokefalos, *Practice of Shared Responsibility*, *supra* note 25, 128, at 150–151.

[160] Human Rights Committee, *Israil v. Kazakhstan*, Communication no. 2024/2011, UN Doc. CCPR/C/103/D/2024/2011 (2011), para. 11.

[161] Committee against Torture, *Kalinichenko v. Morocco* (Decision), Communication no. 428/2010, UN Doc. CAT/C/47/D/428/2010 (2011), para. 17.

[162] Human Rights Committee, *Ng v. Canada*, Communication no. 469/1991, UN Doc. CCPR/C/49/D/469/1991 (1994), para. 18.

[163] *Case Concerning the Factory at Chorzów (Germany v. Poland)*, 1928 PCIJ Series A, No. 9, at 47; see also, commentary to Art. 31 ARSIWA, para. 3.

the injured party can claim full reparation from any of these international persons. The obligation of each responsible international person to provide full reparation is complemented by Principle 12, according to which any international person that has made full reparation for an indivisible injury has a right of recourse against all other international persons that share responsibility for that injury.

3. The ILC has not clearly recognized the possibility of claiming full reparation from each responsible international person in situations of shared responsibility. In its commentaries to Article 47 of the ARSIWA, the ILC emphasizes that 'terms such as "joint", "joint and several" and "solidary" responsibility derive from different legal systems and analogies must be applied with care'.[164] The possibility of claiming full reparation from each responsible international person in situations of shared responsibility provided by Principle 10 does not contradict the established rule that international persons must provide full reparation for the injury caused by their internationally wrongful act. Moreover, in its commentaries, the ILC does suggest that 'international practice and the decisions of international tribunals do not support the reduction or attenuation of reparation for concurrent causes, except in cases of contributory fault'.[165] In the words of the ILC, 'unless some part of the injury can be shown to be severable in causal terms',[166] reparation should be provided for the whole injury caused.
4. While the present Principles do not transpose common domestic law doctrines of 'joint', 'joint and several' or 'solidary' liability for indivisible damage[167] to international law, the rationale for such a principle in domestic legal systems – in particular, to offer the victim of the harm the maximum possible chance of having his harm properly and fully compensated',[168] – is comparable to the rationale behind Principle 10. The primary justification for the obligation to make full reparation for all responsible international persons in situations of shared responsibility is the protection of injured persons that, given the limited access to international courts, would otherwise have no remedy. In situations of shared responsibility, it should not be for the injured

[164] Commentary to Art. 47 ARSIWA, para. 3.

[165] Commentary to Art. 31 ARSIWA, para. 12.

[166] Commentary to Art. 31 ARSIWA, para. 13.

[167] See European Group on Tort Law, *Principles of European Tort Law: Text and Commentary* (2005), Art. 9:101; C. von Bar and E. Clive, *Principles, Definitions and Model Rules of European Private Law: Draft Common Frame of Reference (DCFR)* (2009), Art. 4:103(2); Commission on European Contract Law, *Principles of European Contract Law*, Part III (2003), Art. 10:102(2); Alford, 'Apportioning Responsibility among Joint Tortfeasors for International Law Violations', 38 *Pepperdine Law Review* (2011) 233, at 245; Noyes and Smith, 'State Responsibility and the Principle of Joint and Several Liability', 13 *Yale Journal of International Law* (1988) 225, at 251–254; *Oil Platforms (Islamic Republic of Iran v. United States of America)*, Judgment, 6 November 2003, ICJ Reports (2003) 161, paras 66–72, Separate Opinion of Judge Simma.

[168] Noyes and Smith, *supra* note 167, at 254; see also Commission on European Contract Law, *supra* note 167, at 64; von Bar and Clive, *supra* note 167, at 978: '[I]n order to protect the victim of damage caused by several people … the obligation of reparation arising out of damage is solidary.'

person to 'prove how much damage each did, when it is certain that between them they did all'.[169] The injured person also 'should not be required to prove which particular elements of damage were attributable to each'.[170] The obligation of each responsible international person sharing responsibility to make full reparation contributes to the securing of the remedial function of international responsibility. Although the protection of the rights of injured persons is not the only purpose of the law of international responsibility,[171] it is one of its primary functions.

5. The protection of the position of injured persons is particularly important in light of the practical hurdles often present in situations of shared responsibility, such as the possibility that a claim may not be brought against all responsible international persons. Moreover, an obligation of full reparation for all responsible international persons that share responsibility can contribute to the protection of the interests of injured parties by inducing international persons to agree on the apportionment of responsibility *ex ante*.[172] The practice of the EU provides an illustration in this regard. In particular, the possibility of joint and several responsibility may have been one of the reasons why the EU has developed a practice of attaching special 'declarations of competence' to international agreements to which both the EU and/or its member states are parties.[173]
6. The obligation stated in Principle 10 finds support in practice and doctrine. In situations of shared responsibility for a single internationally wrongful act, the application of the established rules on reparation results in an obligation of each responsible person to provide full reparation. The obligation of reparation in Articles 31 of the ARSIWA and the ARIO requires a responsible international person to 'make full reparation for the injury caused by its internationally wrongful act'. When a single wrongful act for

[169] *Summers v. Tice*, 33 Cal. 2d 80 (1948), at 85–86; see also *Earnshaw & Others Case (Zafiro Case) (U.K. v. U.S.)*, 30 November 1925, reprinted in UNRIAA, vol. 6 (2006) 160, at 164: '[W]e do not consider that the burden is on Great Britain to prove exactly what items of damage are chargeable to the Zafiro.'

[170] Third Report on State Responsibility, *supra* note 23, para. 276(c).

[171] See the discussion on the private and public law dimensions of international responsibility in Nollkaemper and Jacobs, 'Shared Responsibility in International Law: A Conceptual Framework', 34 *Michigan Journal of International Law* (2013) 359, at 400–403.

[172] See, e.g., Convention on the Law of the Sea (UNCLOS) 1982, 1833 UNTS 3, Art. 6, Annex IX, which is the result of firm opposition by EU member states at the Law of the Sea Conference to a proposed general rule of joint and several liability. See J. Heliskoski, *Mixed Agreements as a Technique for Organizing the International Relations of the European Community and Its Member States* (2001), at 150.

[173] Ahlborn, 'To Share or Not to Share? The Allocation of Responsibility between International Organizations and Their Member States', 88 *Die Friedenswarte – Journal of International Peace and Organization* (2013) 45, at 64; see also Kuijper and Paasivirta, 'Further Exploring International Responsibility: The European Community and the ILC's Project on Responsibility of International Organizations', 1 *IOLR* (2004) 111, at 120, who assert that the threat of joint and several liability in UNCLOS, *supra* note 172, Art. 6, Annex IX 'is a good incentive for the Community and its Member States to provide prompt and truthful information on demand' about where responsibility lies.

which multiple actors are responsible caused the whole (indivisible) injury, all responsible actors are under an obligation to make full reparation for the whole injury.[174] In situations of shared responsibility for multiple internationally wrongful acts, when each contribution would be by itself sufficient to cause the whole damage (concurrent contributions), an obligation of full reparation of each responsible person can also be inferred from the abovementioned established rules on reparation because each conduct could have caused the whole injury. In situations of cumulative contributions, Principle 10 is justified by the need to protect injured persons, and finds support in practice.

7. In the *Corfu Channel* case, the ICJ did not reduce the reparation owed by Albania to the UK even though it was evident that Albania's conduct was only one of the factors that led to the explosions (the other one being the laying of the mines by a third state).[175] Likewise, the UN Compensation Commission considered that Iraq had to fully compensate the damage caused concurrently by Iraq's invasion and occupation of Kuwait and by the trade embargo and related measures.[176] In his dissenting opinion to the *Oil Platforms* case, Judge Bruno Simma found 'no objection to holding Iran responsible for the entire damage even though it did not directly cause it all'.[177] Moreover, based on a 'modest study of comparative tort law', he concluded that the principle of joint and several liability (which would allow for Iran to be held responsible for the full damage) 'can properly be regarded as a "general principle of law" within the meaning of Article 38, paragraph 1(c) of the Court's Statute'.[178]

8. In the *Nauru* case, Nauru instituted proceedings against Australia for the way Nauru had been administered, which had resulted in the mining out of Nauru's phosphate lands. Since the territory of Nauru had been administered through a common organ of Australia, New Zealand and the UK, Australia had 'raised the question whether the liability of the three states would be "joint and several" (*solidaire*), so that any one of the three would be liable to make full reparation for damage flowing from any breach of the obligations of the Administering Authority'.[179] In his separate opinion, Judge Mohamed Shahabuddeen supported Nauru's contention that the three

[174] Third Report on State Responsibility, *supra* note 23, para. 277; Talmon, *supra* note 60, at 211; d'Argent, 'Reparation, Cessation', *supra* note 151, at 238.

[175] Third Report on State Responsibility, *supra* note 23, para. 34.

[176] UN Compensation Commission, Governing Council Decision, Compensation for Business Losses Resulting from Iraq's Unlawful Invasion and Occupation of Kuwait where the Trade Embargo and Related Measures Were Also a Cause, UN Doc. S/AC.26/1992/15_*/, 4 January 1993, at 4, para. 9: '[T]he full extent of a loss, damage, or injury may be attributed both to Iraq's unlawful invasion and occupation of Kuwait and to the trade embargo and related measures; they are parallel causes.' See Pusztai, *supra* note 20, at 211.

[177] *Oil Platforms*, *supra* note 167, para. 73, Separate Opinion of Judge Simma.

[178] *Ibid.*, para. 74.

[179] *Certain Phosphate Lands in Nauru*, *supra* note 24, para. 48.

states were bound to joint and several obligations and could be held jointly and severally responsible for the way Nauru had been administered.[180]

9. In a number of cases before international courts and tribunals, one of the parties to proceedings has based its argument on the notion of joint and several liability.[181] In *Aerial Incident of 27 July 1955*, the USA referred to Article 38(1)(c) and (d) of the ICJ Statute when it asserted in its pleadings: '[I]n all civilized countries the rule is substantially the same. An aggrieved plaintiff may sue any or all joint tortfeasors, jointly or severally, although he may collect from them, or any one or more of them, only the full amount of his damage.'[182] In *Treatment in Hungary of Aircraft and Crew of United States of America*, the USA asked the ICJ to decide that Hungary and the Soviet Union were jointly and severally responsible for the damage caused to the US,[183] and in the *Legality of Use of Force* cases brought by Serbia and Montenegro against 10 different states, Serbia and Montenegro argued that the respondent states were jointly and severally responsible for the actions of the NATO military command structure.[184]
10. In the *Eurotunnel* arbitration, the claimants argued that joint and several liability of France and the UK 'followed from the fact that the [relevant] Instruments contemplate the Governments cooperating and coordinating their actions in making appropriate provisions in those fields'.[185] The Tribunal rejected the argument that joint and several liability resulted *per se* from the cooperative character of the obligations in the field of security and frontier controls, though it did eventually rule that both France and the UK were responsible for their failure to maintain conditions of normal security and public order in and around the Coquelles terminal. The claimants were therefore entitled to recover the losses resulting directly from this breach, to be assessed in a separate phase.[186] In another example, the International Tribunal for the Law of the Sea's (ITLOS) Seabed Disputes Chamber affirmed that multiple sponsoring states can incur joint and several liability when they contribute to a common damage.[187] In this case, this conclusion was

[180] *Ibid.*, paras. 283–286, Separate Opinion of Judge Shahabuddeen.

[181] Nollkaemper, 'Issues of Shared Responsibility before the International Court of Justice', in E. Rieter and H. de Waele (eds), *Evolving Principles of International Law: Studies in Honour of Karel C. Wellens* (2012) 199.

[182] *Aerial Incident of 27 July 1955 (USA v. Bulgaria)*, Merits – Memorial submitted by the United States Government, 2 December 1958, Part I, 229.

[183] *Treatment in Hungary of Aircraft and Crew of United States of America (United States of America v. Hungarian People's Republic; United States of America v. Union of Soviet Socialist Republic)*, Application Instituting Proceedings, 16 February 1954, ICJ Reports (1954) 10.

[184] *Legality of Use of Force (Serbia and Montenegro)*, *supra* note 66, at 40.

[185] *Eurotunnel Arbitration*, *supra* note 59, para. 165.

[186] *Ibid.*, at para. 319. This next phase, concerned with the determination and allocation of damages, was terminated when the parties reached a settlement, the precise terms of which are not publicly available. See Baetens, *supra* note 158.

[187] *Responsibilities and Obligations of States with Respect to Activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, para 201. See Plakokefalos, 'Environmental Protection of the Deep Seabed', in Nollkaemper and Plakokefalos, *Practice of Shared Responsibility*, *supra* note 25, 380, at 393.

also based on Article 139(2) of the Convention on the Law of the Sea, which explicitly provides for joint and several liability when international persons act together.

11. Principle 10 also finds considerable support in scholarship. Many scholars have advocated in favour of an obligation to provide full reparation incumbent on each responsible international person in situations of shared responsibility or have argued that international law provides bases for such an obligation.[188]
12. Principle 10 stipulates an exception to the obligation of each responsible international person to provide full reparation for the indivisible injury caused in situations in which the contribution of the international person to the injury is negligible. Whether a contribution to indivisible injury is negligible depends on the circumstances of the case as well as on the relative importance of the contribution in relation to the injury. For instance, if an international person provided only minor logistical support to a major military operation conducted by other international persons, its contribution may be negligible for the purposes of establishing the obligation of reparation. This is in line with the ILC commentary to Article 16 of the ARSIWA, which recognizes that where 'the assistance may have been only an incidental factor in the commission of the primary act, and may have contributed only to a minor degree, if at all, to the injury suffered [an international person] should not necessarily be held to indemnify the victim for all the consequences of the act'.[189] On the other hand, in the *Urgenda* case, the Supreme Court of the Netherlands rejected the argument of the Dutch State according to which, because its contribution to climate change through emissions of greenhouses gases was minor, it should not bear responsibility at all in relation to climate change. While this statement appears to refer to the primary obligations of the Netherlands, it would seem to be equally relevant for the determination of responsibility in terms of secondary rules.[190]
13. When no obligation of full reparation arises because the contribution to injury is negligible, the international person concerned may still be under an obligation to provide partial reparation for the indivisible injury caused,

[188] Noyes and Smith, *supra* note 167, at 225; B. Smith, *State Responsibility and the Marine Environment: The Rules of Decision* (1988), at 59–62; Graefrath, *supra* note 92, at 380; Yee, 'The Responsibility of States Members of an International Organization for Its Conduct as a Result of Membership or Their Normal Conduct Associated with Membership', in Ragazzi, *supra* note 17, 435; Steinberger, 'The WTO Treaty as a Mixed Agreement: Problems with the EC's and the EC Member States' Membership of the WTO', 17 *EJIL* (2006) 837; Chinkin, *supra* note 60, at 181; Voigt, 'State Responsibility for Climate Change Damages', 77 *Nordic Journal of International Law* (2008) 1, at 19–20; Orakhelashvili, 'Division of Reparation between Responsible Entities', in Crawford *et al.*, *supra* note 17, 647; d'Argent, 'Reparation, Cessation', *supra* note 151; Vandenhole, 'Shared Responsibility of Non-State Actors: A Human Rights Perspective', in N. Gal-Or, C. Ryngaert and M. Noortmann (eds), *Responsibilities of the Non-State Actor in Armed Conflict and the Market Place* (2015) 75.

[189] Commentary to Art. 16 ARSIWA, para. 10.

[190] See *The Netherlands v. Stichting Urgenda*, *supra* note 81.

which would be apportioned based on an estimation of its contribution to the injury.[191] The extent of the obligation of reparation for injury in case of negligible contribution may be decided on a case-by-case basis, taking into account the nature of the injury and of the respective contributions as well as standards of remoteness of damage, foreseeability, fault and reasonableness.

Principle 11
Forms of reparation in situations of shared responsibility

1. Full reparation for the indivisible injury caused shall take the form of restitution, compensation and satisfaction, either singly or in combination.
2. When one or more of the responsible international persons is under an obligation to make restitution, each of the other responsible international persons are under an obligation to ensure that restitution is made.
3. In so far as the damage is not made good by restitution, each of the responsible international persons is under an obligation to compensate for the indivisible injury caused.
4. When full reparation entails an obligation to give satisfaction, this obligation is owed by each of the responsible international persons.

Commentary

1. Principle 11 concerns the different forms of reparation in situations of shared responsibility. It is based on Articles 34 of the ARSIWA and the ARIO as well as on how these provisions are further specified in Articles 35–37 of the ARSIWA and the ARIO, and it extends those provisions to situations in which multiple international persons cause an indivisible injury.
2. Principle 11, paragraph 1, spells out the forms of reparation as they are established in the law of international responsibility. They consist of restitution, compensation and satisfaction and can be used either singly or in combination with one another in order to achieve full reparation.[192] Paragraph 1 of Principle 11 is premised on the view that international persons sharing responsibility may be under an obligation to provide distinct forms of reparation.
3. In situations of shared responsibility, only some of the responsible international persons may be in a position to make restitution in kind. For instance, an individual can only be released by the international person that has custody of him or her. As restitution must be provided when materially possible,[193] an international person in a position to provide restitution has an

[191] See, e.g., *Lliuya v. RWEAG*, District Court Essen, 15 December, 2016, where a Peruvian farmer argued that 0.47 per cent of his climate change related damages should be compensated by the German Energy company RWE because it contributed to a degree of 0.47 per cent to global greenhouse gases emissions.

[192] Commentary to Art. 34 ARSIWA, para. 2.

[193] Arts 35 ARSIWA and ARIO.

obligation to do so. Pursuant to Principle 11, paragraph 2, other international persons sharing responsibility that are not in the position to provide restitution have an obligation to ensure that restitution is made by those international persons that are in a position to do so. As with the obligation to seek cessation stated in paragraph 2 of Principle 9, the conduct required by such an obligation may vary based on the degree of influence that the international persons can exert over the conduct of each other.[194]

4. The obligation formulated in paragraph 2 of Principle 11 has been recognized in various cases. One example is the case of *Sayadi and Vinck v. Belgium* before the Human Rights Committee. Belgium had communicated personal information concerning two Belgian nationals to the relevant UN Sanctions Committee, on the basis of which they were unjustly placed on the corresponding UN sanctions list. The Human Rights Committee concluded that Belgium's conduct had resulted in a violation of the right to private life of Sayadi and Vinck,[195] with the consequence that Belgium should provide them with an effective remedy. The Human Rights Committee considered that even though Belgium itself was unable to remove their names from the Sanctions Committee's list, it was under the obligation 'to do all it can to have their names removed from the list as soon as possible, … to make public the requests for removal … [and] to ensure that similar violations do not occur in the future'.[196] Similarly, in the case of *Serrano Sáenz v. Ecuador*, the Inter-American Commission on Human Rights concluded that Ecuador had illegally detained Serrano Sáenz, had held him incommunicado and in inhumane conditions and had later illegally and summarily deported him to the USA, where the victim had been sentenced to death. The Commission recommended Ecuador 'take the necessary and timely measures, legal and diplomatic, with a view to the return of said person to his country of birth, from where he was arbitrarily deported'.[197] Another example of an obligation to make efforts to ensure that another international person provides restitution can be found in the case of *Rahmatullah v. Secretary of State for Foreign & Commonwealth Affairs* in which UK forces in Iraq had captured Rahmatullah and transferred him to the custody of US forces. The British Court of Appeal held that the UK had 'an international legal obligation to demand the return of the applicant'.[198]

5. Principle 11, paragraph 3, provides for an obligation of compensation in situations in which restitution in kind is materially impossible or not sufficient

[194] ICRC, *supra* note 120, para. 164.

[195] Human Rights Committee, *Sayadi and Vinck v. Belgium*, Communication no. 1472/2006, UN Doc. CCPR/C/94/D/1472/2006 (2008), para. 10.13.

[196] *Ibid.*, para. 12.

[197] Inter-American Commission on Human Rights, *Serrano Sáenz v. Ecuador*, Case 12.525, Report no. 84/09, 6 August 2009, para. 80(1).

[198] *Rahmatullah v. Secretary of State for Foreign & Commonwealth Affairs & Another* [2011] EWCA Civ 1540, 14 December 2011, para. 35.

to wipe out all of the consequences of the wrongful act(s).[199] Each of the responsible international persons is then under an obligation to compensate for the indivisible injury caused. In situations in which an international person can provide restitution but is unwilling to do so, other international persons will be under an obligation to provide compensation for the indivisible injury pursuant to paragraph 3 of Principle 11. In the case of *Al-Jedda v. United Kingdom*, the ECtHR ordered the UK to provide monetary compensation for the wrongful detention of Al-Jedda in Iraq,[200] although the USA, as a joint occupying power, also contributed to the injury.[201] In the *Mothers of Srebrenica* case, the Dutch Supreme Court ruled that the Netherlands should compensate for the damage caused by not giving the male refugees inside the UN compound the option of staying in the compound and thus denying them the 10 per cent chance of not being exposed to the inhumane treatment and executions by the Bosnian Serbs.[202] While the UN was likely also responsible for not preventing the deaths of the male refugees, the Netherlands alone was held to compensate.[203]

6. As the *Al-Jedda* and *Mothers of Srebrenica* cases illustrate, the performance of the obligation to provide full compensation can be claimed from each international person that shares responsibility. This is of particular relevance if international proceedings are instituted against only one of the responsible international persons – for example, as a result of jurisdictional hurdles that make it impossible to bring all of the responsible international persons before a particular international court or tribunal. In the case that multiple international persons are brought before an international court or tribunal, full reparation can be claimed from all of them together. In such a situation, the court itself may choose to apportion compensation between the responsible international persons, so that they jointly provide full reparation to the injured person. Such an approach can be observed in the case law of the ECtHR when cases are brought against multiple states parties to the ECHR.[204] For example, in *M.S.S. v. Belgium and Greece*, both Belgium and Greece were found responsible in relation to the injury of the asylum seeker who Belgium had transferred to Greece, where he was subjected to inhumane detention conditions. The ECtHR apportioned compensation of non-pecuniary damages on an uneven basis between Greece and Belgium, the latter being obliged to pay a considerably larger sum.[205] Also in the *Rantsev* case, involving

[199] Arts 36 ARSIWA and ARIO.

[200] *Al-Jedda v. United Kingdom*, *supra* note 49, para. 114.

[201] *Ibid.*, para. 67.

[202] Supreme Court of the Netherlands, ECLI:NL:HR:2019:1284, 19 July 2019, para. 5.1.

[203] See also the commentary to Principle 4, para. 8. The applicants had initially brought claims against the UN before the Dutch courts, but the Dutch Supreme Court, as the final instance, upheld the immunity of the UN (Supreme Court of the Netherlands, Case no. 10/04437, 13 April 2012, paras 4.3.6–4.3.14).

[204] Den Heijer, 'Procedural Aspects of Shared Responsibility in the European Court of Human Rights', 4 *Journal of International Dispute Settlement* (2013) 361, at 378–381.

[205] *M.S.S. v. Belgium and Greece*, *supra* note 138, paras 402–423; den Heijer, 'Refoulement', *supra* note 153, at 504.

shared responsibility of Cyprus and Russia, the ECtHR apportioned the obligation to pay compensation unevenly.[206]

7. Principle 11, paragraph 4, indicates that when full reparation entails an obligation to provide satisfaction, this obligation is owed by each of the responsible international persons and is borne equally by each of them. Satisfaction may consist of an acknowledgement of the breach, an expression of regret or a formal apology.[207] After the destruction of the Chinese embassy in Belgrade by bombings by NATO states in 1999, the British prime minister apologized to the Chinese government even though the missiles had not been fired by a British plane.[208] In the case of *Nada v. Switzerland*, the ECtHR found that 'there has been a violation of Article 13 of the Convention taken in conjunction with Article 8',[209] after a prior finding that the relevant Security Council Resolution 1390 (2002) imposed an obligation on UN member states to take measures capable of breaching human rights.[210] This finding of a violation of the ECHR could be considered satisfaction as a form of reparation to be borne by both Switzerland and the UN.[211]

Principle 12
Right of recourse

1. An international person that has made full reparation for an indivisible injury has a right of recourse against all other international persons that share responsibility for that injury.
2. When an international organization shares responsibility with other international persons, this Principle is without prejudice to the rules of that organization.

Commentary

1. Principle 12 states that an international person that has provided full reparation to an injured person has a right to seek contribution from other

[206] *Rantsev v. Cyprus and the Russian Federation*, *supra* note 83, paras 341–343; see also Gallagher, *supra* note 83, at 560.

[207] On the different modalities by which satisfaction may be expressed, see the commentary to Arts 37 ARSIWA and ARIO.

[208] *Legality of Use of Force (Serbia and Montenegro)*, *supra* note 66, at 16; Nollkaemper, 'Issues of Shared Responsibility', *supra* note 181.

[209] ECtHR, *Nada v. Switzerland*, Appl. no. 10593/08, Judgment of 12 September 2012, para. 214.

[210] *Ibid.*, para. 172.

[211] The applicants in the *Nada* case had not submitted any claim in respect of pecuniary or non-pecuniary damage, which is why the Court did not award any further reparation (*ibid.*, paras 239–240). On declaratory judgments as a form of satisfaction, see the commentary to Art. 37 ARSIWA, para. 6 (referring to the *Corfu Channel* case).

Annex 531

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ORIGINAL PAPER

The doctrine of liability fixation of state responsibility in the convention on transboundary pollution damage

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Abstract

Transboundary pollution is an international problem. There are currently no adequate mechanisms under international law to balance the relationship between state sovereignty and state responsibility for transboundary pollution harm. The doctrine of liability fixation is at the core of state responsibility and plays an important role in transboundary environmental harm. What type of responsility, fault liability or strict liability should be adopted in state responsibility for transboundary pollution harm? Scholars have different viewpoints on this key issue, and states may have fundamentally different positions and differ widely in terms of both policy and substantive issues. There is uncertainty and variability in the drafting of international conventions on transboundary pollution harm. This article focuses on the normal international legal rules regarding the principle of imputation, and it analyses the advantages and disadvantages of adopting the principles of strict liability and fault liability, their value and the relationship between state responsibility and civil subject liability. This article aims to explain why it is necessary to change the direction of the doctrine of liability fixation of state responsibility in the convention on transboundary pollution harm, and it considers a new direction to adapt to the complex interests and demands of various countries. From the perspective of furthering the prevention of pollution and determining compensation for harm and constructing liability regimes for transboundary pollution, this article proposes the doctrine of the liability fixation of state responsibility and analyses the relevant trends and possible available options.

Keywords Transboundary pollution · State responsibility · Fault liability · Civil liability · Strict liability

Abbreviation

ILC International Law Commission

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1 Introduction

Transboundary pollution refers to the external or spillover substances that cross a country's political boundaries. With increasing demand for resources, and technological progress that has caused widespread or even catastrophic threats of transboundary harm, the economic costs of transboundary pollution activities have been externalized. This problem has proven particularly difficult to resolve, and it is one of the most persistent problems in environmental law (Hall 2007, p. 681). A standardized state responsibility rule for the prevention of transboundary pollution has not yet been developed. The principles of liability and compensation in cases of transboundary damage are not well developed (Rao 2004, p. 224). The fact is that the legal machinery enabling compensation for transboundary pollution harm has generally been deliberately neglected (Guruswamy 2010, p. 212). Why does the state responsibility compensation system for transboundary pollution damage remain so underdeveloped in the world? Although the roles of concepts such as fault, strict liability or absolute liability has attracted major attention and controversy in international law, the establishment of the type of state responsibility for transboundary pollution harm is still a vague concept that appears to differ widely in terms of both policy and substantive issues. Scholars have theoretically addressed the issue of liability for negligence as the principle of state responsibility and the constituent element of that principle. This issue has been recognized as being central to international environmental law and as an international priority. The work of the International Law Commission (ILC) will remain superficial if the elements of this relationship are not more broadly defined and more deeply studied, which must include the ascertaining of whether strict liability constitutes the basis of a state's liability for activities involving risk (ILC 2003, p. 46).

Currently, the idea that all transboundary harm should be prohibited and presumed unlawful has generally been rejected. To adapt to the progress of science and technology and the development of the world economy, more comprehensive theories of international law are needed. We should pay attention to the relevant legal developments with regard to due diligence and the prevention of state responsibility in international law. Further, we must realize that the issues involved are complex and that neither fault liability nor strict liability can provide a fully feasible path of resolution; rather, a variety of systems and measures must be integrated.

1.1 The substantial development and progress of state responsibility for transboundary environmental pollution harm

Inherent in industrial development is the fact that, in modern society, damage to the environment cannot be completely avoided. Decades of international efforts have not changed the current trend of transboundary pollution growth. The lack of a common comprehensive interest is one of the most difficult problems obstructing the enactment of effective transboundary pollution law. Given the highly conflicting interests involved in a transboundary pollution dispute, the source state has little incentive to cooperate in forming a legal regime (Merrill 1997, p. 1017). The source state will refuse to consent to any adjudication of harm, as evidenced by the fact that, to date, not a single harmed country has even attempted to bring a claim against a major emitting country in international climate law (Cole 2015, p. 307). In spite of the increasing number of cases of transnational environmental damage, compensation is in fact paid only very rarely (Doeker and Gehring 1990, p. 2). Cases

where compensation is obtained are the exceptions, not the rule, and states are reluctant to develop adjudicatory regimes for implementing state responsibility (Guruswamy 2010, p. 212). A claim for transboundary pollution harm remains a hard battle for claimants because state responsibility is influenced by the treaties involved, the nature of the cases and even the balance of interests among states.

Although the explosion at the Chernobyl nuclear reactor in 1986 caused significant increases in radioactivity levels in more than twenty downwind states, no state sought compensation by bringing suit against the Soviet Union (Merrill 1997, p. 958). Because the former Soviet Union is neither a member state of the Paris Convention nor the Vienna Convention, the above two conventions are not applicable. Japan's Sendai earthquake caused severe damage to the nuclear power plant in Fukushima, and 80% of the leaked radioactive material entered the ocean. The damage to the global ecology, especially marine ecology, was unprecedented (Jin 2016, p. 53). However, most states around the world that use nuclear energy, including China and Japan, have not been involved in the two international treaties concerning compensation for damages caused by nuclear energy production. Therefore, in regard to the nuclear damage accident at Fukushima, these treaties could not provide a direct basis for the confirmation of liability between China and Japan. States' domestic activities can have consequences of negative transboundary harm that usually cannot be compensated without interstate coordination. Therefore, state responsibility arises only if there is a breach of the obligation of a treaty (quasi-contractual arrangement) or customary international law (the international legal principle of 'no harm to another country').

1.2 The role and limitations of international treaties on state responsibility for transboundary pollution

Contractual agreements are the most promising means by which to achieve collective action on transboundary pollution. However, the source state will refuse to participate in a regime of centralized regulation unless some benefit can be linked to its agreement (Merrill 1997, p. 981). Consequently, some existing transboundary pollution treaties are primarily committed to the construction of information-sharing and consultation mechanisms rather than establishing substantive state responsibility regimes. For example, the *Convention on long-range transboundary air pollution in 1979* clearly stipulated the following in a footnote: 'The present Convention does not contain a rule on State liability as to damage' (United Nations 1979, p. 1445). Usually, the adoption of strict or absolute rules of state responsibility in the practice of state treaties is rare. In international law, there is only one convention that directly stipulates state responsibility for transboundary damage and specifically stipulates the form of that liability, namely the 1972 *Convention on international liability for damage caused by space objects* (ILC 2003, p. 44). This is the first example of an international convention imposing this form of such absolute liability on states. 'States seem to accept a fully-fledged international liability only in areas where issues of global and military importance prevail over economic and civil aspects.' (Doeker and Gehring 1990, p. 2). Conventions on civil liability for the international environment are mainly focused on fields such as nuclear pollution and oil contamination; moreover, only a few conventions have been passed. These conventions have established a compensation regime of strict liability for injurious consequences of uses of nuclear energy and oil pollution, and they have involved issues of civil liability as well as restrictions of liability for operators and enterprises. Many states are unwilling to bear specific state responsibility in this area and make the operators accept strict liability, whereas the state

holds only complementary liability; furthermore, it is even possible for the state to evade or lessen its liability.

Liability for transboundary pollution among states sometimes results in 'cooperation agreements'. In 2005, an explosion occurred at the Jilin Petrochemical Co., Ltd., which severely polluted the water of the Songhua River. This accident affected some cities in the Russian Far East and damaged water resources. China and Russia once had communications about their claims for compensation; however, there was no related international convention that could be applied to the transboundary pollution between the two states. After this pollution accident, in 2008, the two states signed a cooperation agreement on the transboundary water area (Xie et al. 2013, p. 86). Since the 1980s, Indonesian plantations have caused periodic forest fires and transboundary toxic haze pollution, which has had a serious impact on Indonesia and Southeast Asia (Mohan 2017, p. 1). The plantations' emphasis on profit at the expense of the environment and society has led to serious and harmful consequences affecting millions of people (Jiang and Li 2017, p. 69). To further control haze pollution, ASEAN formulated the *ASEAN Cross-Border Haze Pollution Agreement* in 2002.

The issue of aerial emissions containing hazardous waste crossing borders will likely become more prominent with increased global industrialization (Callahan 2018, p. 176). The general principle of international law reflects that one country should not allow activities within its borders to interfere with activities within another sovereign state's borders (Sinden 2010, p. 324). However, sovereign immunity potentially exempts the majority state's liability for transboundary pollution from the convention and from customary law. Therefore, the international community should develop a workable law regime framework for the prevention of transboundary pollution and an adequate compensation mechanism for damages.

2 The construction of strict liability in international conventions about transboundary pollution harm

Since 1978, transboundary pollution harm has been on the agenda of the ILC; this issue is within the purview of 'International liability for injurious consequences arising out of acts not prohibited by international law' (ILC 1978, p. 6). The ILC eventually formulated two documents: the *Draft articles on prevention of transboundary harm from hazardous activities*, completed in 2001, and *International liability for injurious consequences arising out of hazardous activities*, completed in 2006. The two drafts have three elements: prevention, cooperation and strict liability for harm compensation; so long as pollution has not reached the level of 'significant' or 'substantial' harm, it is considered tolerable (ILC 1996, p. 108). While the term 'strict liability' was not used by the ILC, a regime that was very close to the rules of strict liability was produced. Regardless of whether strict liability should be introduced into conventions on state responsibility for transboundary pollution, the advantages and disadvantages of adopting the principle of strict liability are an important question in international treaties and deserve extended analysis.

2.1 The proposed concept of the international liability regime of the state and the need for same

The traditional concept of state responsibility arises only when an international 'wrong' is committed by a state. However, some of the activities resulting in transboundary pollution are not recognized as being an international 'wrong' and do not give rise to state

responsibility. The international community generally believes that countries should have reasonable freedom to carry out activities within their territories even though such activities may lead to transboundary harm. Although most of the industrial activities that cause transboundary pollution are not prohibited, a legal system is needed to adjust the risks and consequences of such activities (Birnie and Boyle 2002, p. 100). A greater focus on harm, and indeed risk of harm, is in opposition to the attribution of wrongful conduct (Townley 2018, p. 619). The international community has realized that actual harm has been produced in cases where appropriate preventive measures have not been taken and the state should undertake a certain form of compensation. 'Countries may need to assume corresponding international liability for their lawful acts due to the necessity of reality' (Cassese 2009, p. 324). Otherwise, potentially affected countries and the international community may persist in requiring the country of origin to prevent all harm caused by relevant activities, which may result in the activities themselves being banned (ILC 2002, p. 90). In other words, the state could incur international responsibility where it has failed to prevent transboundary environmental harm originating in its territory that was foreseeable, direct, significant and within its power to prevent had it exercised due care (Banda 2019, p. 1950).

Therefore, due to the limitations and insufficiency of traditional state responsibility in handling transboundary environmental harm, the ILC hopes to compile a set of state responsibility compensation systems that are different from traditional state responsibility, and it has decided to focus on the consequences of activities instead of the legitimacy of the activities themselves. At the beginning of its work on the topic of state responsibility, the ILC agreed that 'it was necessary to adopt a formula which did not prejudge the existence of responsibility for lawful acts' (ILC 1978, p. 149). Consequently, modern international law further includes within the scope of state responsibility activities that are not prohibited by international law but do actual damage to other countries, and it has accordingly established the concept of 'international liability'. The new concept of 'international liability' created by the draft articles is based on lawful acts and establishes states' liability to undertake primary rules (obligations) (ILC 1994, p. 156). Such obligations may be indicated as 'primary' if they derive from the general rules and principles of international law, which imposes specific duties on states. The consensus seems to be that the term 'liability' for the consequences of ultra-hazardous, but lawful acts flows directly from a 'primary' norm (Dumbauld 1987, p. 550). Any specific duty to prevent an event is a primary obligation; if this primary duty is violated, the secondary rules of state responsibility will apply. Specifically, the breach of such primary obligations inevitably leads straight to state responsibility (Horbach 1991, p. 71). Thus, countries that may be influenced can require the source state to abide by the obligation of prevention when facing activities that might cause 'significant' or 'substantial' transboundary harm, even though the activity itself is not prohibited.

The objectives of the ILC in the preparation of 'international responsibility' for the codification of non-wrongful acts are to provide compensation to injured states and to require liable states take adequate measures to minimize the risk of potential harm. The separation of state responsibility and international liability seemingly was the main principle of this purpose such that responsibility was related to wrongfulness, whereas liability should be used only in relation to acts not prohibited by international law, specifically, lawful acts. The ILC sought to articulate a universal principle governing all transboundary pollution; while certain actions are not wrong, a violation of the rules on prevention would give rise to state responsibility. Of course, the failure to comply with the obligation to prevent or to minimize risk does not mean that the activity itself is prohibited. To this extent, the

formulation of state international liability, as well as the corresponding obligations, is of great value for the prevention of transboundary pollution.

However, some scholars have also put forward different opinions on the concept and system of international liability. There is possible confusion between the topics of state responsibility and international liability. There are problems of conceptual complexity and responsibility consistency between the two topics. The draft does not explain how non-unlawful acts could give rise to state responsibility. It is not clear that the conceptual basis on which it is distinguished from state responsibility is either sound or necessary (Boyle 1990, p. 1). It is noted that the scope and the content of the topic remained unclear due to factors such as conceptual and theoretical difficulties, appropriateness of the title and the relationship of the subject to 'state responsibility' (ILC 1997, p. 59). The draft may weaken the general normalization of international law and the regulations that may lead to the establishment of traditional state responsibility. In their draft harm principles, with no satisfactory explanation, the ILC illogically and untenably purports to transplant state responsibility into those draft rules (Guruswamy 2010, p. 226). One commentator has objected to considering international liability at all on the grounds that it is 'fundamentally misconceived' in a manner that 'may induce a general confusion in respect of the principle of state responsibility' (Magraw 1986, p. 316). Therefore, the draft has substantive defects and major conceptual problems. Furthermore, there is no concept of 'international liability' for legitimate activities in state practice and the jurisprudence of the International Tribunal. The coexistence of the two types of state responsibility only increases confusion, and the borderline between the two concepts even seems to have disappeared, or it has become extremely vague. 'There cannot be any real distinction between the topic of state responsibility and international liability, particularly if the focus is on state liability' (Rao 2004, p. 225). 'International liability' and 'state responsibility' still must be clearly defined to diminish the confusion. 'The relationship between international liability and state responsibility is both promising and troubling.' (Magraw 1986, p. 330).

2.2 The strict liability of the state as the subject of international liability

Strict liability can play a larger role in punishment than fault liability, and linked with the result, it transfers the basis of liability from fault to risk. Some of the debate regarding the principle centres on whether strict liability is required for all transboundary pollution harm (Hall 2007, p. 700). One scholar observed that under the strict liability doctrine, there was no opportunity for a state to defend itself on the grounds that its actions were reasonable or that the damage was unforeseeable (Stone 1993, pp. 55–57). The ILC draft is intended to articulate a general principle applicable to all transboundary pollution about state responsibility. The ILC considered the idea of imposing strict liability on the state in whose territory the hazardous activity was situated instead of channelling the same to the private operators in charge of the activity (Rao 2004, p. 226). As the principle of exception is applicable to extremely hazardous activities, strict liability for transboundary environmental harm has also gained support from scholars.

Scholars who take positive viewpoints believe that the status of the strict liability principle in liability for transboundary harm should not only be strengthened but also become a general principle; it should at least remain so in regard to the field of so-called extremely hazardous activities (Gaines 1989, p. 330). Some scholars believe that the concept of international liability should be developed on the basis of establishing a general obligation of strict or absolute liability for environmental damage (Doeker and Gehring 1990, p.3) and

that the principle of fault liability is too simple to be convincing. Scholars also claim that fault is not a condition for constituting international liability (Brownlie 1983, pp. 41–46) and that international treaties, international practice and many important international documents on the development trends of international society have confirmed the strict liability of the state in the field of transboundary pollution (Wang 1995, p. 118; Zhou 2004, p. 237; Zhao 2000, p. 581). Although some states are resistant to the idea of strict liability because they view it as a potential infringement on their sovereignty, it is the standard most likely to serve the purpose of the international liability topic, especially in cases involving transboundary pollution (O'Keefe 1990, p. 207). Because international law lacks the public authority to prohibit activities with the potential for high levels of hazard that might result in severe transboundary harm, to maintain social justice, strict liability must be applicable, at least at the present time (Suzuki and Souji 1988, p. 169). States' adoption of the regime of strict liability to fulfil their compensation liability is a major breakthrough in traditional international law. A form of strict liability should be adopted on the international plane to provide relief for those physically harmed by transboundary pollution (O'Keefe 1990, p. 153). It is unfair to make victims bear unavoidable damage only because the source country of the pollution has fulfilled its obligation of due diligence (Birnie and Boyle 2002, p. 184). In theory, strict liability could better solve transboundary problems with the goal of building a consensus regarding environmental obligations. However, to date, this system has served to protect the interests of the affected state.

Contrary to the minority opinion on considering and attaching importance to the application of strict (non-fault) liability for severe harm in hazardous activities, a negative attitude is taken among many scholars towards the new general compensation liability that has not yet been formulated in the regulations of customary international law, and these scholars have resisted establishing a regime of strict liability (ILC 1992, p. 44). The legal literature is divided over the problem of international responsibility for environmental harm (Mazzeschi 1992, p. 37). The perspective that links the occurrence of harm directly with the obligation of compensation without considering the situation of the source state does not have a legitimate basis in current nation-state practices (Usuki 1989, pp. 1–70). In fact, states do not intend to begin determining the conditions of state responsibility for transboundary environmental harm in the convention. The concepts of strict liability and absolute liability are well known in the domestic law of some countries and in international law involving certain activities; however, a great number of activities covered by one article have not been fully addressed under international law (ILC 1996, p. 128). Some scholars maintain the view that under current substantive law, there are no precise or general rules concerning strict liability, particularly for the transboundary harm caused by activities involving risk of such harm (ILC 1991, p. 109). In customary international law, there is no rule of strict state liability; such a basis for liability can be applied only if a treaty provides for it (Sersic 2008, p. 289). The concept of strict liability has aroused some strong opposition in the Commission and in the Sixth Committee of the General Assembly because it is not based on any norm of general international law (O'Keefe 1990, p. 182). Most international lawyers on this topic have found this argument unpersuasive, specifically, 'States' direct liability, i.e. strict liability, for transnational injuries brought about by such private activities.' (Handl 1980, p. 231). Such scholarly opinions should not be ignored.

The question of whether the attribution of liability is an appropriate form is a core problem of compensation. If the draft articles were intended to be legally binding, at least the core part of that instrument would have to be drafted to reflect lex lata and be acceptable to most states (ILC 1991, p. 112). Without widespread national consent and acceptance, it is very difficult to generalize the principle of strict liability, and it is

impossible for that principle to become the 'best method' or 'preferable method' for international environmental protection. With a relatively small number of state practices under strict liability, the direct introduction of the principle would lead to improper restraint on the state's sovereignty. Even if liability might be imposed (which seems unlikely), it must be accepted or taken up voluntarily (Cole 2015, p. 320). It is still too early to introduce the concept of strict liability into international law, and it is questionable whether such rules are mature enough to be codified by the ILC. It is difficult to compile one type of centralized, universal strict liability of state mechanism to handle all types of transboundary pollution questions. It is not a mature practice for the draft articles to use strict liability to adjust various risks and harms. Only a very few treaties establish strict state liability for the transboundary pollution harm from lawful activities.

Currently, a variety of names have been used for the modern theory that imposes strict liability. Regarding the terminology, the definitions of result liability, risk liability, strict liability, objective liability, absolute liability, adventure liability or cause-and-effect liability are still not clear, and all these concepts are still in use (Phil 1984, p. 35). However, the guidelines identifying the strict liability of the state have yet to be fully developed, and strict liability has not yet been formed as a general rule of customary international law. An undue emphasis on strict liability at the international level appeared inappropriate while states in practice adopted a more pragmatic approach to compensation without relying upon any one consistent concept of liability (Rao 2004, p. 226). Strict liability could be regarded as one of the foundations—but not the only foundation—of the compilation of the draft convention, or it could be more suitable to apply a flexible form of strict liability (Zhou 1988, p. 121). In other words, such a system does not block states adopting the principle of strict liability for compensation in the special convention system. Therefore, fair allocation should be implemented through consultation with relevant countries that carry out hazardous activities and bring about harm.

3 The liability focus: allocation of loss instead of international liability of state

The content of the topic of strict liability remains unclear due to factors such as conceptual and theoretical difficulty, the degree of appropriateness of titles and the relationship between 'international liability' and 'state responsibility' (ILC 2003, p. 43). The working group (ILC) therefore decided that the issues of 'prevention' and 'international liability' should be addressed separately, and it shifted to studying the mode by which the losses of transboundary harm could be allocated. At its 2002 session, the working group of the ILC recommended a new policy framework that stressed the development of guiding principles on the allocation of loss for transboundary damage instead of a strict regime of international liability (Rao 2004, p. 226). The solutions to the problem of transboundary pollution have transformed from the state responsibility model to the civil liability model, and solutions 'concentrate on harm caused for a variety of reasons but not necessarily involving state responsibility' (ILC 2003, p. 44). The draft has deviated from the original intention of the system and has fundamentally shaken the foundation of state responsibility for compensation. They attempted to introduce a new approach that would not have to rely exclusively on any one concept of liability, much less on state liability.

3.1 Strict civil liability regime for transboundary environmental harm

The non-existence of a general rule of the strict liability of states, and their hesitation to adopt a convention containing provisions on such liability, led to the eventual adoption of civil liability schemes. The draft principles adopted on 5 August 2004 are the result of an important change in the orientation of the ILC on the topic of international liability. Its purpose is to emphasize the allocation of loss to be distributed among the different private parties who carry out hazardous activities and not to establish a national system of international liability for compensation. The liability stipulated in the rules of international law has nothing to do with state responsibility in the strict sense (Cassese 2009, p. 324). The codification scheme eventually generates strict liability; however, the liability subjects are mainly civil subjects. Liability for activities falling within the scope of the present draft principles primarily attaches to the operator, and such liability does not require proof of fault (ILC 2006, p. 60). This approach indicates the ILC's new way of thinking about the special subject of responsibility for compensation. This thinking focuses on the question of choosing an appropriate remedy, and it pays attention to promoting the adoption of a fairer, more convenient and more efficient method to compensate innocent victims for transboundary harm.

The system of international treaties, as well as the laws and practices of various countries, has widely adopted the form of imposing the main liability for compensation on operators. Operators who have direct control over activities should assume primary liability in any allocation system of loss. The operator of hazardous activities that cause damage incurs non-fault liability for such harm (Herdegen 2007, p. 100). Civil liability regimes are usually established by treaty, and the norm of strict liability that operates in practice has gained support. Compared with state responsibility, a civil liability claim has considerable advantages and may be become a more effective means of environmental protection. In treaty practice, the strict liability has formed the basis for the construction of liability regimes (ILC 2006, p. 74). Some conventions require operators to have appropriate insurance or other financial guarantees for compensation liability, unless the operator itself is a state. The perspective of the 'internalization of the cost', which fundamentally constitutes the principle of 'the polluter pays', thus promotes an economic function (ILC 2006, p. 61). Furthermore, strict liability is a good approximation of the principle of 'the polluter pays' (Birnie and Boyle 2002, pp. 93–94). Operators are forbidden from seeking refuge to carry out hazardous activities and not paying for the harm they cause, fundamentally encouraging the exercise of the utmost caution and due diligence and thereby preventing damage.

The reasons for the imputation of strict liability lie in neither the culpability for activities nor defects in actors' meanings; rather, they originate from a basic concept of compensation in our legal consciousness. Superficially speaking, strict liability considers only the causal relationship between acts and harm, not the fault of actors. The development trend shifts from the theory of a strict and necessary requirement of predictability ('appropriateness') to a relatively loose causal relationship (Wetterstein 1997, p. 40). Strict liability allows certain force majeure exceptions; therefore, the liability is not absolute, usually with a few exonerating grounds. Defendants can be free from liability only if they are able to prove that the harm was caused by the victims, the third party or force majeure. The principle of strict liability has become a civil liability policy that can be used after the negotiating state's consideration of factors such as the nature of specific risks, the effectiveness of preventive measures and the potential economic sustainability of hazardous activities.

3.2 The advantages and disadvantages of adopting the principle of a strict civil liability regime

New facilities, technologies, substances or materials are the source of unknown and unpredictable risks. This type of convention on the civil liability for transboundary pollution appears centrally in some fields; specifically, in these fields, there are important reasons for the states to advocate conventions formulated on civil liability for transboundary pollution. From the perspective of the proposition of having operators assume liability for compensation, those who cause high risk and seek economic benefits should be liable for controlling any injurious consequences of their activities (Doeker and Gehring 1990, p. 7). Such a system turns compensation for losses into costs and transfers those costs to consumers through the market or allocates them to society by way of liability compensation insurance. As a result of the application of systems such as insurance, funds and liability limitations, many liabilities for environmental harm have been transferred or dispersed. Of course, adopting a strict liability system to internalize external costs reduces the product or service competitiveness of the polluters.

Civil strict compensation liability has the advantages of clear boundaries and convenient application; it serves as a principle of law and is rooted in existing state practice. The special rapporteur noted that international conventions on civil liability with respect to hazardous activities have, in general, imposed strict liability, primarily on the grounds that the victims should be compensated promptly (ILC 1994, p. 156). The emphasis of laws has been shifted from shouldering the blame to compensating for loss (Fuchs 2004, p. 5). The main objective in the future may be to encourage states to conclude agreements on strict civil liability applicable to specific areas involving the risk of transboundary environmental damage. A rule of strict liability has the important advantage of protecting environmental values.

The problem of transboundary pollution must be solved through negotiation and cooperation between countries. We can say that strict liability also exacerbates the conflict inherent in transboundary pollution dispute resolution. Two states may have a fundamentally different position on certain types of transboundary harm. If the source country is to be forced to take expensive control measures, a balance must be struck between the costs and benefits of regulation. Strict liability offers an even more one-sided, pro-environmental rule, that is, a rule likely to be favoured by rich nations and resented by poor nations (Merrill 1997, p. 1017). Some commentators doubt 'whether the 'polluter pays' principle has achieved the status of a generally applicable rule of international law' (Sands 2003, p. 280). In the case of activities that are not dangerous but still carry the risk of causing significant harm, there may be a better case for liability to be linked to fault or negligence (ILC 2006, p. 79). Strict liability makes it easier to compensate for damage than fault liability; however, it weakens the obligation to prevent occurrence by emphasizing compensation for loss. If we draw a general imputation principle regarding the system of civil liability, it might lead us into a more complex field. The principle cannot be treated as a rigid rule of universal application, nor are the same means used to implement such principle in all cases (Birnie and Boyle 2002, pp. 94–95). Although the draft principle of strict civil liability has advantages, it requires a coordination of the national laws, and such a task is fraught with difficulties.

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CHAPTER

2

The United Nations' journey to global environmental sustainability since Stockholm: An assessment

2.1 Introduction

Conservation and sustainable management of the natural environment, including its biodiversity, is critical for sustaining long-term human existence. Acknowledging this, and in response to the increasing threat of environmental degradation in the west, the United Nations convened its first and paradigm-breaking global environmental conference, the Stockholm Conference in 1972 to launch "a new liberation movement to free men from the threat of their own thralldom to environmental perils of their own making" (United Nations, 1972: 45). The Conference also sought "to inspire and guide the peoples of the world in the preservation and enhancement of the human environment" (United Nations, 1972: 3). Since then, a multitude of international environmental conferences and summits have been held and hundreds of multilateral agreements, treaties, and declarations adopted, generating the momentum needed to promote sustainable use and management of natural resources and environmental protection globally.

As a result, the environment has become a major issue on the international development agenda, and developed and developing countries alike have also been galvanized into action. Countries across the global divide have set up their ministries or departments of environment and produced their national development agenda with great emphasis on environmental protection. To reinforce environmental protection efforts, countless environmental laws and regulations have been enacted by all member states of the United Nations. This has been instrumental in shaping the international environmental legal regimes and sustainable policy agenda to reverse environmental degradation on our planet. The main purpose of this chapter is to assess the United Nations' impact on the evolution of global environmental regimes in promoting environmental sustainability.

The term environmental sustainability is associated with responsible human decisions and actions in interactions with the natural environment. It may well be that many natural systems can withstand human disturbances or external pressure only up to a certain

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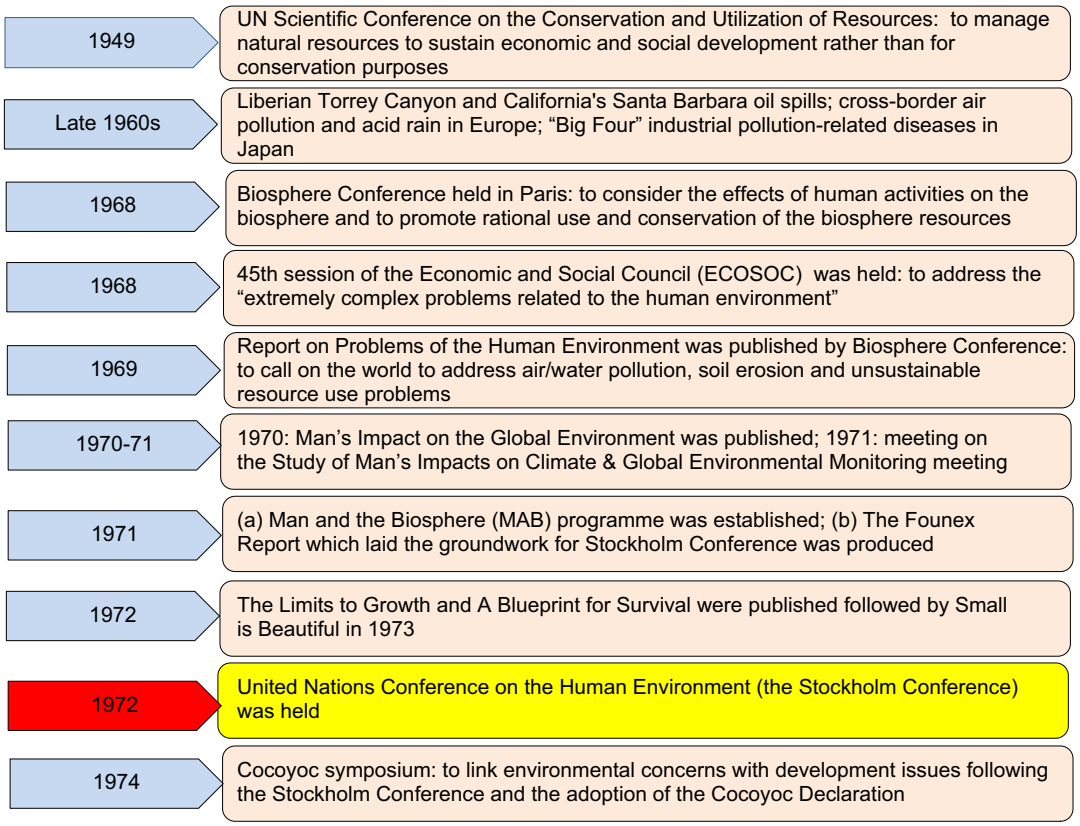
threshold (or "tipping point") beyond which ecological discontinuities and possibly irreversible consequences may occur (Srebotnjak et al., 2010). Thus within the present context, environmental sustainability may be defined as sustaining the ecological integrity of the natural system while optimizing its economic use (Choy, 2015a). Conceptually, ecological integrity may be explained using Holling's concept of sustainability which is expressed in terms of ecological stability and resilience (Holling, 1986).

Stability and resilience are descriptive concepts which posit the dynamic properties of a system. Stability refers to the ability of a natural system to return to its equilibrium state or viable level of regeneration after a temporary ecological disturbance has resulted from, for example, an act of economic exploitation (Holling, 1973; Choy, 2015a). The criterion is that the more rapidly the system restores itself and the less it fluctuates, the more stable it would be (Holling, 1973: 14). The term "resilience" is a measure of the persistence of systems and of their ability to absorb change and disturbance in the face of human perturbation while maintaining its organizational structure (Holling, 1973: 14). It may be technically defined as "the magnitude of disturbance that can be absorbed before the system changes its structure by changing the variables and processes that control behavior" (Holling and Gunderson, 2002: 4). Thus a system may said to be Holling sustainable or ecologically sustainable if and only if it is able to revert to its stable or resilient position when exposed to external disturbances.

However, it must be noted that in a real-world system, determining the critical ecological thresholds requires an in-depth understanding of the ecosystem dynamics underlying uncertainties around multiple and stochastic disturbances (Sasaki et al., 2015). Granted, given our very limited scientific understanding of the complex system dynamics of natural systems and the ecological surprises arising from the interaction between ecological and the social systems, it would not be easy, and may be practically unfeasible to decide when, how and to what extent to intervene to enable the ecosystem to absorb various shocks and disturbances and reorganize itself into a Holling resilient state. Despite being confronted with uncertainty, we must apply the precautionary measures based on the philosophical principle of environmental conservation as discussed in Section 4.41 to avoid irreversible anthropogenic disturbances of our global ecosystem, that is, the resilience-based precautionary strategy.

2.2 The United Nations' journey to global environmental sustainability: The evolution of the Stockholm green era

Environmental issues were not a major concern of the United Nations in the period following its establishment in 1945. In 1949, the United Nations convened its first conference on the environment, the UN Scientific Conference on the Conservation and Utilization of Resources, to address the urgent issue of the improvident use of the earth's dwindling resources against the background of dramatic population growth and increasing resource demand (United Nations, 1950). The Conference focused primarily on six major themes—land, water, forests, wildlife and fish, fuels, energy, and minerals. However, the main thrust of the Conference was on ways to manage these natural resources to sustain economic and social development rather than from a conservation perspective (Jackson, 2007) (Timeline 2.1).



TIMELINE 2.1 The evolution of the Stockholm Conference.

Acknowledgment of international environmental problems as distinct from the conventional resource-use issues arose in the late 1960s spurred by several widely publicized events. These included the environmental and ecological damage caused by massive oil spills such as that caused by the grounded Liberian Torrey Canyon supertanker which poured 120,000 tonnes of heavy crude oil onto hundreds of miles of British and French coastlines in 1967. Two years later in 1969, another tragic oil spill occurred from an offshore well in California's Santa Barbara Channel (M'Gonigle and Zacher, 1981).

Other environmental issues were the cross-border air pollution and acid rain in Europe in the late 1960s, the widespread use of pesticides and fertilizers and other sources of pollution such as water pollution. Severe industrial pollution in Japan in the 1960s also fueled growing concerns about human unsustainable activities (Kapur, 2015). The "Big Four" industrial pollution-related diseases in Japan were "Minamata Disease" and "Niigata Disease," both caused by mercury poisoning, "Itai–Itai Disease" caused by cadmium poisoning, and "Yokkaichi Asthma" caused by air pollution. The publication of the paradigm-breaking books and articles such as the *Silent Spring* on the use of potentially harmful pesticides (Carson, 1962) and "The Tragedy of the Commons" on widespread ecological degradation and

unsustainable resource use has also contributed toward shaping the perception of critical environmental issues (Hardin, 1968).

The first major sign of global environmental concern was reflected in the convention of an intergovernmental world conference, the Biosphere Conference, held in Paris in September 1968 to consider the effects of human activities on the biosphere, including the effects of air and water pollution and deforestation and to promote rational use and conservation of the biosphere resources (Sands et al., 2012). A report on *Problems of the Human Environment*, published in the year after the Conference, suggested that the world should undertake serious action to address air and water pollution, soil erosion, and the profligate use of natural resources (ECOSOC, 1969; Haq and Paul, 2012). The biosphere conference led to the establishment of the Man and the Biosphere (MAB) program in 1971. The MAB is an intergovernmental scientific program which aimed to establish a scientific basis for the improvement of relationships between man and the environment and to curb biodiversity loss (Haq and Paul, 2012).

Another major breakthrough in the late 1960s was the formal inclusion of the environment for the first time into the list of international concerns at the 45th session of the Economic and Social Council (ECOSOC) held in 1968 as a result of the relentless efforts of Sweden to push for international policy action to urgently address the "extremely complex problems related to the human environment" (Howe, 2014: 70). The proposal to hold a conference on the human environment was raised by Sweden at this 45th session through a convincing memorandum outlining the purpose of the Conference aimed at raising public awareness among governments and society around the world on the seriousness of environmental problems (Ivanova, 2005). Sweden also extended its offer to convene the conference in its capital city and to make a significant financial contribution (Howe, 2014). As a result, ECOSOC passed a resolution [resolution 1346 (XLV) of July 30, 1968] to recommend to the General Assembly to convene a United Nations conference on the problems of the human environment. In digression, it may be noted in light of the above that in 1967, Inga Thorsson, a Swedish diplomat, and Sverker Åström, Sweden's permanent representative to the United Nations, objected to the United Nations plans to convene a conference on the peaceful use of atomic energy, the fourth in a row, on the grounds that it would benefit mostly the limited number of nuclear industries in the North (Ivanova, 2005; Howe, 2014).

The General Assembly, noting "the continuing and accelerating impairment of the quality of the human environment caused by such factors as air and water pollution, erosion and other forms of soil erosion, secondary effects of biocides, waste and noise" (United Nations, 1968: 2), decided to pass a resolution, Resolution 2398 (XXXIII) in response to the need to convene a global conference, called the United Nations Conference on the Human Environment in Stockholm (the Stockholm Conference). The main purpose of the Conference was to encourage, and to provide guidelines to governments and international organizations to design policy actions to protect and improve the human environment and to remedy and prevent its impairment by means of international cooperation (United Nations, 1969).

In the meantime, to lend force to the urgent need for the Conference, four major collaborative and overlapping interdisciplinary studies of the global climatic and ecological effects of human activities were produced more or less concurrently between 1969 and 1972. They are: (1) Man's Impact on the Global Environment which studied a wide range of environmental issues including desertification, pollution of the air and oceans, and

other harms, and warned of the impending risk of global warming (SCEP, 1970); (2) Following up SCEP 1970, a meeting on the Study of Man's Impacts on Climate was held focusing on the analysis of climate change and warned further of the dangers of anthropogenic emissions of greenhouse gases (GHGs) and particle pollutants (SCEP, 1970; Matthews et al., 1971); (3) Global Environmental Monitoring focused on the accumulation, review and assessment of available information on human-induced environmental changes and their impacts, and also sought to assess methodologies of measurement of environmental parameters, among others (SCOPE, 1971); and (4) The Limits to Growth, produced by the Club of Rome (Meadows et al., 1972). Except for The Limits to Growth, each of these studies was undertaken explicitly for the 1972 United Nations Conference on the Human Environment (Sohn, 1973; Howe, 2014).

2.3 The Stockholm impediment and the Founex Report

The developing countries were, however, wary about the North's environmental movement. They feared that "the humanitarian concern for environment can far too easily become a selfish argument for greater protectionism" (United Nations, 1971: para. 54, p. 27). They also feared that "the concern for environment may become a priority unto itself in the developed countries" and that this would hinder or slow down their economic development (United Nations, 1971: para. 58, p. 29). To the developing region, the North environmental protection initiatives were no more than a neo-imperialist ploy to keep former colonies in a poor state of development (Gaines, 1997). Many developing countries distrusted Stockholm as an attempt to "ratify and even enhance existing unequal economic relations and technical dependence, miring them in poverty forever" (Hecht and Cockburn, 1992: 849). They therefore threatened to boycott the Conference (Selin and Linnér, 2005). Several developing countries such as Brazil charged that the global conference was "a rich man's show to divert attention from the real needs of developing countries" (Engfeldt, 2009: 41).

The developing countries also asserted that major environmental problems identified for the Stockholm Conference such as industrial pollution, uncontrolled urban development, and wilderness degradation, were a consequence of unrestrained industrialization in the United States, Europe, and the Soviet Union. While these nations were concerned about the impacts of environmental degradation on the quality of life of their people in relation to, for example, recreational open spaces, clean air and water, and endangered species, the developing countries were more concerned about the problems of poverty and related issues such as access to clean water, malnutrition, and proper sanitation.

The developing countries, especially in Latin America and Africa, were worried that the environmental movement in the West would aggravate their poverty problems by stifling development (Howe, 2014). On a more radical note, political ecologist, Professor Héctor Alimonda from Universidade Federal Rural do Rio de Janeiro in Brazil lamented that environmental degradation was caused by persistent colonialism and he further claimed that "over the five centuries, entire ecosystems were destroyed by the implementation of monoculture export crops" (Alimonda, 2011: 22, quoted in Martinez-Alier et al., 2016: 37).

Wade Rowland summarized the above North–South environmental and development dilemmas succinctly: "Opinions among the developing nations ranged from an assumption

that problems relating to the environment were a concern for the highly developed nations alone [...] to a belief that the developed nations were using environmental doomsday predictions as a racist device to keep the non-white third world at a relatively low level of development. Environmental concerns were a neat excuse for the industrialized nations to pull the ladder up behind them" (Rowland, 1973: 47). In a nutshell, the preStockholm era was marred by a politics of contestation and reluctant participation by the South in the northern global environmental movement (Najam, 2005).

On the other hand, the industrialized countries such as Canada, the Netherlands, Sweden, and the United States, in their attempt to secure political commitment to environment protection, argued that the origins of environmental problems were fundamentally the same in all countries and it was indeed the poor who would benefit most from environmental protection in addressing issues such as soil deterioration, water pollution, urbanization, negative effects of dam construction, and loss of wildlife. They further contended that in the process, they would have possibly avoided many costly mistakes made earlier by the industrialized countries in their quest for economic development (Engfeldt, 2009).

In addressing the North–South environmental and development conflicts and in an attempt to secure the support of the developing countries for the Conference, the Secretary-General for the Stockholm Conference, Maurice Strong, established a panel made up of 27 experts from developing and developed countries (the Founex Panel) which met in Founex between June 4 and 12, 1971 as part of the preparations for the Conference to discuss the issues surrounding the relationship between development and environment (United Nations, 1971). The panel affirmed that "the current concern with environmental issues has emerged out of the problems experienced by the industrially advanced countries" and that "these problems are themselves very largely the outcome of a high level of economic development," and "the creation of large productive capacities in industry and agriculture" (United Nations, 1971: para. 2, p. 3). The panel further revealed that the scale of environmental disruptions constituted serious hazards to human health and wellbeing in many communities.

In recognition of the developing countries' concerns, the panel acknowledged the distinction between "development as cause of environmental problems" as had been experienced primarily experienced by the industrialized countries (United Nations, 1971: para. 5, p. 4) and "environmental problems that reflect the poverty and the very lack of development" as experienced predominantly in the developing countries (United Nations, 1971: para. 4, p. 23). The panel recognized that addressing environmental problems in the developing countries called for the need to address the problems of under development and dire poverty. This is reflected explicitly in its argument that "the kind of environmental problems that are of importance in developing countries are those that can be overcome by the process of development itself" (United Nations, 1971: para. 5, p. 4). More specifically, the panel recognized that "development becomes essentially a cure for their major environmental problems" (United Nations, 1971: para. 5, p. 4).

The recognition of environmental issues in developing countries is an aspect of widening the development concept beyond the conventional and more narrowly conceived objective of economic growth measured in terms of increase in gross national product. To secure support for environmental protection from the developing countries, the panel further recommended that "the increased cost burden arising from greater attention to environmental problems should be accompanied by a greater willingness to provide additional assistance"

by the developed countries to developing the South (United Nations, 1971: para. 13, p. 7). The panel produced the Founex Report which played a critical role in laying the ground work for the 1972 Stockholm Conference. This is examined in the next section.

2.4 The Stockholm Conference and the North–South greening conflicts

The Founex Report played a critical role in bridging the policy and conceptual differences in the overriding objectives of environmental protection and economic development between the north and the South. The Report stimulated developing countries' participation at Stockholm based on the understanding that environmental commitments reached at the Conference would not be used to restrain their development efforts (Marong, 2003). However, the Soviet Union and most of the East Bloc countries boycotted the Conference over the Western exclusion of the German Democratic Republic, a nonmember country, from the Conference on the basis that it was neither a member of the United Nations nor of any specialized United Nations agency (van Dever, 2006).

The boycott affected, but did not seriously frustrate, the Conference as it was finally held between June 5 and 16, 1972 in Stockholm after lengthy negotiations and preparations. The Stockholm Conference formally known as the United Nations Conference on the Human Environment, with its theme *Only One Earth*, is the first global conference on human environmental impact in United Nations history which formally placed the environment on the global political agenda. Here, it may be reiterated that as noted above, the 1949 United Nations Scientific Conference on Conservation and Utilization of Natural Resources was the first global United Nations environmental conference which was held to discuss sustainable use of natural resources. As far as the Stockholm Conference is concerned, it is often regarded as the first United Nations global environmental conference that formally placed the environment on the global political agenda.

The Stockholm Conference was attended by 113 member states of the United Nations calling "for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment" (United Nations, 1972: 1). The Stockholm Conference gave birth to the concept of sustainable development, commonly known as "eco-development" in those days, as a way of reconciling the competing claims of economic development and environmental protection (Dresner, 2008).

However, the Conference did not have a cordial feel from the beginning with the developing countries sharply criticizing the industrialized countries as the main cause of the present global environmental decline because of their unrestrained economic exploitation of the earth's system. The developing region also lamented that environmental concerns postulated by the affluent north, associated with achieving a better quality of life with the enjoyment of a clean environment, was an attempt to stifle developmental aspirations in the poverty-stricken South. The Ivory Coast, for example, showed reservation about placing environmental issues as a global priority. At the Conference, it announced that it would prefer more pollution problems to poverty problems "insofar as they are evidence of industrialization" (Rowland, 1973: 50).

More telling is the statement by the Indian Prime Minister, Indira Gandhi, who claimed that poverty was the worst form of pollution: "How can we speak to those who live in

villages and in slums about keeping the oceans, the rivers and the air clean when their own lives are contaminated at the source? Are not poverty and need the greatest polluters?" (quoted in Tinker, 1975: 481). She further pointed out that "the inherent conflict is not between environment and development but between environment and reckless exploitation of earth's resources in the name of development" (quoted in Kumar and Kumar, 2015: 11). Peter Walker, Britain's Secretary of State for the Environment put it bluntly, "many developed countries have turned rivers of beauty into open sewers, the very air we breathe into poisonous gases" (quoted in Tinker, 1975: 481).

In Latin America, the governments rejected the idea of the "Limits to Growth" and opted for distinct styles of development in accordance with ecological and social reality. In consonance with the argument contained in the Founex Report, the Latin American governments further emphasized that in their regions which had been plagued by an uneven distribution of income for centuries, the solution to environmental problems was not to halt economic progress in the developing region but in changing unequal distribution of power and wealth in the world (Pintasilgo, 1992; Martinez-Alier et al., 2016). The Brazilian delegation, for example, made it clear that it needed to develop first to be able to clean up later and "no growth" was unacceptable (Edwards and Roberts, 2015; Roberts and Newell, 2017). The World Bank President, Robert McNamara also echoed the same sentiments at the Conference, confessing that continued economic growth in both the North and the South necessarily constituted a precondition for improved global environmental protection and management. Indeed, the developing South had persistently argued that the only way to circumscribe local environmental problems was through rapid industrial progress and economic growth (Rowland, 1973).

Of great concern to the developing South, especially Brazil, which was an important player at the Conference, was the fear that the industrialized North might use ecological concepts such as "our Spaceship Earth" and the "common heritage of mankind" embodied in international environmental treaties to restrict their sovereign rights to exploit their own natural resources, to alter their development paths, to reduce aid, or to slow down investments (Edwards and Roberts, 2015; Roberts and Newell, 2017). The Brazilian delegation also lamented that no one should claim that all nations have a share of the earth's resources that forms a "common pool" or the "World Trust." The delegation viewed that this "beautiful assumption" requires sharing also of economic and political power, industry, and financial control, which the wealthy nations found quite unthinkable (Roberts and Newell, 2017). Brazil's noncompromising environmental position struck a chord with most other developing nations, while the Sri Lankan ambassador warned that: "we must not, generally speaking, allow our concern for the environment to develop into a hysteria" (Edwards and Roberts, 2015: 43). The developing countries also argued for "additionality" of financial aid for environmental improvement. The "additionality" refers to additional international assistance apart from those resources already identified for international official development aid (ODA) target of 1% of the world's rich countries Gross National Income (GNP) for the Second Development Decade in the 1970s. The 1% target is the same as the target set for the First Development Decade in the 1960s (Stokke, 2009).

Meanwhile, the economically secure developed countries which approached environmental issues as a quality of life issue were of the view that overpopulation and the Western-style of industrialization in the developing countries would accelerate the rate of global environmental decline (Ellison, 2014). Worried about the world shrinking resource

base and spreading pollution, they stressed the importance of environmental protection and argued that it was an obligation of all countries in the world to take necessary domestic environmental measures to protect their environment and to refrain from causing harm beyond their borders in the process of pursuing economic growth.

2.5 Outcomes of the Stockholm Conference

The Conference put the industrialized rich on a collision course with the poor developing South over the priorities of economic growth and environmental protection. These seemingly endless North–South conflicts reflected the need for a re-thinking and this led to the adoption of the following three major sets of nonbinding decisions and recommendations which bear the marks of compromise between the North and the South:

a. Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration) which aimed to guide the international community on the preservation and enhancement of the human environment. The declaration consists of 26 principles covering a multitude of issues ranging from environmental education, science and technology, nuclear weapons, institution, transfer of financial and technological assistance, the need for social and economic development in the developing region, and the sovereign right of resource exploitation, among others. Principles 1 to 4 of the declaration explicitly acknowledge the need to exercise prudent use of natural resources in line with ecological balance of the biosphere or the carrying capacity of our planet for the benefit of present and future generations.
b. Resolution on Financial and Institutional Arrangements for International Environmental Cooperation which sought to promote effective implementation of measures by the international community to safeguard and enhance the environment.
c. The Stockholm Action Plan on the Human Environment which entailed concrete and specific recommendations for national and international actions. It includes 109 recommendations on international measures to arrest global environmental degradation (Sohn, 1973). This document is intended to supplement the Stockholm Declaration.

The Conference led to the establishment of the United Nations Environmental Program (UNEP) within the United Nations system. UNEP serves as an institutional catalytic agent for the promotion and coordination of global environmental activities (Appendix 2.1). It also laid the foundation for the creation and adoption of a series of important documents at and after the Conference to enhance environmental sustainability. These include:

i. the 1972 World Heritage Convention which calls on the Member States to protect and preserve not only World Heritage sites but also national heritage situated in their territories. The Convention has had impact in raising greater awareness of the importance of protecting these sites for the benefit of both present and future generations;
ii. the Convention on International Trade in Endangered Species (CITES) of Wild Fauna and Flora, an international treaty drawn up in 1973 which aims to promote wildlife conservation, to prevent overexploitation of wild fauna and flora, and to regulate international trade in species threatened with extinction including 5000 animals and 29,000 plant species (CITES Secretariat, 2010); and

iii. the 1979 Convention on the Conservation of Migratory Species (CMS) of Wild Animals, or the Bonn Convention, was concluded in recognition of Recommendation 32 of the Action Plan adopted at the Stockholm Conference to protect migratory species of wild animals of global importance. The Convention recognizes that wild animals including terrestrial, aquatic, and avian migratory species in their innumerable forms are an irreplaceable part of the earth's natural system and each generation owes a responsibility to conserve these biological resources for the benefit of future generations. The Convention pays specific attention to protecting and conserving wild animal species that regularly cross-national borders or that migrate in international waters. The convention entered into force only in November 1, 1983.

It may further be added that in 1980, the International Union for Conservation of Nature and Natural Resources (IUCN), in collaboration with UNEP, published an important document on biodiversity conservation, the World Conservation Strategy, which aimed to spearhead eco-development by identifying priority conservation issues and key policy options (IUCN-UNEP-WWF, 1980; Drexhage and Murphy, 2010). Three major concerns of the Strategy are (1) the maintenance of essential ecological process, (2) the preservation of genetic diversity, and (3) sustainable use of species and ecosystems (for a brief summary, see Appendix 2.1).

APPENDIX 2.1 United Nations engagement with environmental sustainability in the postStockholm era (1974–2000 period).

1974	UNEP/UNCTAD symposium on. "Patterns of Resource Use, Environment and Development Strategies" (or the Cocoyoc Symposium) held at Cocoyoc, Mexico	The main purpose of the symposium was to identify the economic and social factors leading to environmental deterioration and to discuss patterns of resource use, environment, and development strategies. The symposium led to the adoption of the Cocoyoc Declaration which called on "political leaders, governments, international organizations and the scientific community to use their imagination and resources to elaborate and implement programs aimed at satisfying the basic needs of the poorest people throughout the world" (World Development, 1975: 144).
1979	First World Climate Conference held in Geneva	Established the WCP in 1980 to promote global research on important climate issues including ozone depletion and global warming.
1980	IUCN (currently the World Conservation Union) in collaboration with the UNEP, and the WWF	Published the World Conservation Strategy to promote sustainable resource-use within the carrying capacities of the ecosystems (ecological sustainability). Particularly, its main objectives are (a) to maintain essential ecological processes and life-support systems, (b) to preserve genetic diversity, and (c) to ensure the sustainable utilization of species and ecosystems. It defines conservation as "the management of the human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations".

(*Continued*)

APPENDIX 2.1 (Continued)

1982	United Nations 48th plenary meeting	World Charter for Nature was adopted to protect the ecological integrity, diversity, and genetic viability of ecosystems. It also acknowledged the importance of protecting the intrinsic value of natural resources and called for our understanding of human dependence on nature for long-term socioeconomic sustenance.
1982	Third UNCLOS III	The United Nations Convention on the Law of the Sea, which entered into force only in 1994, aims to prevent, reduce and control pollution of the marine environment, and protect fish stocks from depletion. In particular, highly migratory species of fish and marine mammals would be accorded special protection.
1983	The WCED (the Brundtland Commission) was formed	WCED aimed to hold hearings across the globe and to unite countries to pursue sustainable development. It led to the publication of the Brundtland Report or Our Common Future which defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."
1985	Vienna Convention for the Protection of the Ozone Layer	Provided a framework for efforts to protect the globe's ozone layer from the effects of human activities and led to the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer in 1987, designed to reduce the production and consumption of ozone depleting substances.
1989	The IPCC was established	To focus on scientific assessment on all aspects of climate change and their environmental and socioeconomic impacts with a view to formulating realistic response strategies.
1990	The Intergovernmental Panel on Climate Change (IPCC)	Published the first IPCC Scientific Assessment Report and warned of the impending threat of global warming and its effects on natural and human systems. The Report is made up of three volumes and an overview, namely, (1) Climate Change: The IPCC Scientific Assessment (1990), (2) Climate Change: The IPCC Impacts Assessment (1990), and (3) Climate Change: The IPCC Response Strategies (1990), and (4) First Assessment Report Overview.
1991	IUCN (currently the World Conservation Union), the UNEP, and the WWF	Published Caring for the Earth with the aims of securing a widespread and deeply held commitment to the ethic for sustainable living and to integrate conservation and development.
1992	UN Conference on Environment and Development (the Earth Summit/Rio Summit) held in Rio de Janeiro, Brazil	Documents adopted: (i) The Rio Declaration on Environment and Development—a program of action which spelled out 27 guiding principles for the

(*Continued*)

APPENDIX 2.1 (Continued)

		management of natural resources and environment; (ii) Agenda 21—a 40-chapter and 800-page agreement that laid down 115 specific programmes to help to achieve sustainable development; (iii) Statement of Forest Principles—a brief document containing 15 principles to guide the management, conservation and sustainable development of all types of forests; (iv) The UNFCCC—an international treaty for global cooperation to combat climate change by limiting the emission of greenhouse gases, and (v) CBD—a legally binding multilateral agreement with three main goals: conservation of biodiversity; sustainable use of biodiversity; fair and equitable sharing of the benefits arising from the use of genetic resources. Its overall aim is to protect the diversity of species and habitats in the world. The summit also paved the way for widespread discussions of sustainable development around the issue of climate change.
1995	The Intergovernmental Panel on Climate Change (IPCC)	Released the Second IPCC Assessment Report comprising (1) Working Group I: The Science of Climate Change, (2) Working Group II: Impacts, Adaptations and Mitigation of Climate Change: Scientific-Technical Analyses, (3) Working Group III: Economic and Social Dimensions of Climate Change, and (4) IPCC Second Assessment. The essential message of the Report is that carbon dioxide remains the most important contributor to climate change and the warning that uncontrolled human activities threatened to alter the Earth's climate to an extent unprecedented in human history with destructive impacts such as sea level rise.
1997	Rio +5 Summit (Earth Summit II) held in New York	Special session to review and appraise the implementation of Agenda 21and to deepen the commitments made at Rio (1992).
2000	Millennium Summit held in New York	Adopted the Millennium Declaration which contained eight Millennium Development Goals: (1) eradicate extreme poverty and hunger; (2) achieve universal primary education; (3) promote gender equality and empower women; (4) reduce child mortality; (5) improve maternal health; (6) combat HIV/AIDS, malaria and other diseases; (7) ensure environmental sustainability; and (8) develop a global partnership for development. On environmental the goal of environmental sustainability, the Declaration stated that efforts must be taken to counter the threat of the planet being irredeemably spoiled by human activities. It also called for a new ethic of conservation and stewardship to protect the environment. The Summit committed member nations to achieve these goals by 2015.

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APPENDIX 2.1 (Continued)

1990	The Intergovernmental Panel on Climate Change (IPCC)	Published the first IPCC Scientific Assessment Report and warned of the impending threat of global warming and its effects on natural and human systems. The Report is made up of three volumes and an overview, namely, (1) Climate Change: The IPCC Scientific Assessment (1990), (2) Climate Change: The IPCC Impacts Assessment (1990), and (3) Climate Change: The IPCC Response Strategies (1990), and (4) First Assessment Report Overview.
1991	IUCN (currently the World Conservation Union), the UNEP, and the WWF	Published Caring for the Earth with the aims of securing a widespread and deeply held commitment to the ethic for sustainable living and to integrate conservation and development.
1992	UN Conference on Environment and Development (the Earth Summit/Rio Summit) held in Rio de Janeiro, Brazil	Documents adopted: (i) The Rio Declaration on Environment and Development—a program of action which spelt out 27 guiding principles for the management of natural resources and environment; (ii) Agenda 21—a 40-chapter and 800-page agreement that laid down 115 specific programmes to help to achieve sustainable development; (iii) Statement of Forest Principles—a brief document containing 15 principles to guide the management, conservation and sustainable development of all types of forests; (iv) The UNFCCC—an international treaty for global cooperation to combat climate change by limiting the emission of greenhouse gases, and (v) CBD—a legally binding multilateral agreement with three main goals: conservation of biodiversity; sustainable use of biodiversity; fair and equitable sharing of the benefits arising from the use of genetic resources. Its overall aim is to protect the diversity of species and habitats in the world. The summit also paved the way for widespread discussions of sustainable development around the issue of climate change.
1995	The Intergovernmental Panel on Climate Change (IPCC)	Released the Second IPCC Assessment Report comprised (1) Working Group I: The Science of Climate Change, (2) Working Group II: Impacts, Adaptations and Mitigation of Climate Change: Scientific-Technical Analyses, (3) Working Group III: Economic and Social Dimensions of Climate Change, and (4) IPCC Second Assessment. The essential message of the Reports is carbon dioxide remains the most important contributor to climate change and warned that uncontrolled human activities threatened to alter the Earth's climate to an extent unprecedented in human history with destructive impacts such as sea level rise.
1997	Rio +5 Summit (Earth Summit II) held in New York	Special session to review and appraise the implementation of Agenda 21 and to deepen the commitments made at Rio (1992).

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APPENDIX 2.1 (Continued)

2000	Millennium Summit held in New York	Adopted the Millennium Declaration which contained eight Millennium Development Goals: to (1) eradicate extreme poverty and hunger; (2) achieve universal primary education; (3) promote gender equality and empower women; (4) reduce child mortality; (5) improve maternal health; (6) combat HIV/AIDS, malaria and other diseases; (7) ensure environmental sustainability; and (8) develop a global partnership for development. On the goal of environmental sustainability, the Declaration stated that efforts must be taken to counter the threat of the planet being irredeemably spoiled by human activities. It also called for a new ethic of conservation and stewardship to protect the environment. The Summit committed member nations to achieve these goals by 2015.

CBD, Convention on Biological Diversity; *IPCC*, Intergovernmental Panel on Climate Change; *IUCN*, International Union for Conservation of Nature; *UNCLOS*, United Nations Conference on the Law of the Sea; *UNCTAD*, United Nations Commission on Trade and Development; *UNEP*, United Nations Environment Program; *UNFCCC*, United Nations Framework Convention on Climate Change; *WCED*, World Commission on Environment and Development; *WCP*, World Climate Program; *WWF*, World Wide Fund for Nature.

2.6 The Cocoyoc Symposium

Since Stockholm, various conferences have been convened and a plethora of multilateral and bilateral international environmental documents have been produced and adopted aiming to reconcile the potential conflicts between economic development and environmental sustainability. One of the more significant events was the Cocoyoc Symposium held at Cocoyoc, Mexico in 1974. The symposium, which was jointly organized by the United Nations Environment Program (UNEP) and the United Nations Commission on Trade and Development (UNCTAD), was the first major attempt to link environmental concerns with development issues following the Stockholm Conference. The Cocoyoc Declaration adopted at the symposium called for the need to reform international economic order in the postcolonial world, placing emphasis on the promotion of eco-development. The Cocoyoc Symposium fundamentally dealt with the synthesis of environmental sustainability and economic development especially viewed from the developing countries' perspective.

The Cocoyoc highlighted the bio-capacity limits of the Earth's system denoted as "the outer limits" in fulfilling the "inner limits" of human needs, namely, food, shelter, clothing, education, and health amidst explosive population growth. It placed poverty eradication as the primary goal of all development. While the Stockholm Conference aimed to address global environmental issues in the context of economic development, the Cocoyoc Symposium fundamentally dealt with the synthesis of environmental sustainability and economic development especially viewed from the developing countries' perspective.

More explicit than the Stockholm Declaration, the Cocoyoc Declaration focused on issues of environmental justice, particularly on unequal North–South economic relationship, inequitable distribution of resources, misuse of cheap imported materials, and over and super-consumption by the industrialized North, which directly affected the physical integrity of the earth's system. It bluntly stated that "A growth process that benefits only the wealthiest minority…is not development. It is exploitation" (UNEP and UNCTAD, 1974: 896).

In addressing the above issues, the Cocoyoc Declaration called for the reform of the existing economic order and supported UNEP's efforts to design strategies and assist projects for ecologically sound socioeconomic development (eco-development). The call for reform was closely connected to the United Nations Declaration on the Establishment of a New International Economic Order adopted at the Sixth Special Session of the General Assembly in May 1974. The new order was based on a host of principles, one of which was the "full and effective participation on the basis of equality of all countries in the solving of world economic problems in the common interest of all countries, bearing in mind the necessity to ensure the accelerated development of all the developing countries" (United Nations, 1974).

The Stockholm initiatives reinforced by the Cocoyoc Declaration seemed to provide a new journey of hope both in terms of inspiration and guidelines for the governments and people worldwide to preserve the human environment. Particularly, at Stockholm, it was widely acknowledged that extensive international cooperation among nations and global organizations is significantly important for achieving environmental sustainability as environmental problems do not recognize any political boundaries. This set the stage for the creation of various environmental protection agencies and ministries, and the creation of a host of environmental laws and policies by countries across the world (Drexhage and Murphy, 2010).

2.7 The Stockholm Conference and the emergence of global environmental regimes

It would appear that the Stockholm Conference, as pointed out by Maurice Strong, "marked the first time that nations of the world collectively acknowledged that something has gone wrong with the way in which man had been managing…his relationship with the natural world on which his own survival depends" (quoted in Jacobsen, 1973: 35). Before Stockholm, national environmental policy efforts, especially those targeting genuine environmental protection, were rare, but became common after the Conference. Also, most countries, despite the existence of environmental protection laws even before Stockholm, were fundamentally concerned about sectoral or specific aspects of environmentalism and failed to consider the interconnection of the multiple factors affecting the natural environment (Caponera, 1972). Besides, in the developing countries, many of their environmental legislations were not adequately enforced, rendering them environmentally ineffective.

As a case in point, during the preStockholm period, various environmental laws were passed in the United States—one of the few countries which had developed environmental laws before the Stockholm Conference (Hironaka, 2014). These included the Clean Air Act (1963), the Motor Vehicle Air Pollution Control Act (1966), Air Quality Act (1967), and Clean Air Act (1970). However, at the time of the enactment, these legislations were perceived as necessary for expanding federal control over urban planning and public health rather than for environmental protection. Only with the environmental awareness and understanding developed since the Stockholm Conference have these laws been reconceptualized to embrace environmental protection (Hironaka, 2014).

It may well be that before Stockholm, only a few countries, primarily in the West, had environmental ministries. However, in the postStockholm period, more than 100 countries set up environmental ministries and agencies which developed policies and legislations to deal with environmental issues. In Europe, for example, in the wake of the 1972 Stockholm Conference and growing public awareness and concerns about the biophysical limits to growth, the European Commission established its first Environmental Actions Program (EAP) in 1973 with some of the most important objectives: (1) to prevent, reduce, and contain environmental damage, (2) to conserve an ecological equilibrium, and (3) to promote rational use of natural resources, among others. The second EAP, established in 1977, was essentially a follow-up to the first EAP with greater emphasis placed on nature protection (Hey, 2005). The United Kingdom established its environmental ministry for the first time in 1971, while Canada, Austria, Denmark, East Germany, Netherlands, Australia, and New Zealand established their respective ministries in 1972 (Selin and Linnér, 2005).

In Asia, even before the Stockholm Conference, Japan had enacted 14 environmental protection laws in one session at the so-called "Pollution Diet" after decades of corporate cover-ups of toxic pollution (Kapur, 2015). Japan established its environmental ministry in 1972 (Selin and Linnér, 2005). In the early 1970s, the Chinese authorities in Maoist China began to consider its environmental problems fairly seriously (Taneja, 1998). They became concerned about the environmental issues facing the country and acknowledged the need to take environmental protection seriously in national planning in the face of rapid economic expansion (Cai and Voigts, 1993). The Stockholm Conference seemed to provide China with the opportunity to revisit its unprecedented environmentally destructive industrialization policies implemented under Mao Zedong's "Great Leap Forward" campaign. To note in passing, The Great Leap Forward (1958–60) was Mao Zedong's plan to transform China's economy from a predominantly agrarian society into a modern, industrial communist society through rapid industrialization (Section 3.18).

Indeed, it is often claimed that the Stockholm Conference was the turning point in the development of environmental protection in China (US Department of Commerce, 2002). After Stockholm, the term "environmental protection" began to appear in the Chinese media and in official documents (Taneja, 1998). Since then, China enacted a series of environmental laws and regulations to reinforce its environmental governance for the promotion of sustainable development (Mol and Carter, 2007, see Sections 3.13.1 and 3.17 for a

detailed discussion). Similarly, in India, Indira Gandhi upon her return from Stockholm, began to pass various environmental laws such as the Water (Prevention and Control of Pollution) Act in 1974 and to amend its constitution to include environmental protection among the principles governing State policy (Dembowski, 2001).

In the case of Southeast Asia, environmental issues were not explicitly recognized as a concern when the geo-political region, the Association of Southeast Asian Nations (ASEAN) comprising Indonesia, Malaysia, Singapore, Thailand, and the Philippines, was established in 1967. However, following Stockholm, the region began to integrate environmental concerns into its regional development planning (Koh and Robinson, 2002; see Section 3.12.1). To avoid confusion, Southeast Asia is a subregion of Asia which lies from the South of India to the East of China while ASEAN is a regional intergovernmental organization (IGO) which brings together the 11 Southeast Asian countries comprising Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Vietnam, and East Timor or Timor-Leste. In 1967, ASEAN comprised only five countries as mentioned above.

Also, during the 1970s, all national governments in Latin America created legal and administrative structures for natural resource management. Indeed, the creation of UNEP in 1972 stimulated Latin American active engagement in natural resource and environmental management especially from 1975 onwards. For example, with the support of UNEP, the Spanish Iniciativa de Copenhague para Centroamérica y México was created and various courses and seminars on environmentalism were also organized (Martinez-Alier et al., 2016).

2.8 The Stockholm environmental impacts: Some remarks

However, enlightened ecological awareness and mere acknowledgment of looming environmental disasters do not necessarily reflect real and genuine aspirations for ecologically sound socioeconomic development. It may well be that immediately after the Stockholm Conference, the emerging environmental initiatives or policies, especially in the developing South as briefly elucidated above, were typically symbolic in nature.

In particular, the severe economic recession and energy crisis in the 1970s had undermined states' willingness to implement environmental controlling measures which would strangle the economy further. Thus the differences between the approaches of the affluent North and the developing South toward environment and development were increasingly acute in the 1970s; and responses to the Stockholm environmental initiatives from the South were not particularly promising. As a matter of fact, the Stockholm Conference did not directly lead to a sustainable development movement (Egelston, 2013). Indeed, in reality, it hardly made a ripple in halting unsustainable levels of environmental exploitation and ecological abuse across the globe, especially in the developing South where environmental awareness of the disturbing reality did not lead to actions commensurate to the environmental problems occurred in the same period (PSCD, 2012).

As it turned out, the creation of laws or regulations to promote environmental protection in the South was generally conceived as an unjustified limitation on economic activities, and

existing legal and administrative structures often avoided wholly embracing eco-development principles that guide and promote the rational use of resources (Caponera, 1972). That said, the proliferation of environmental controlling and resource management instruments in the 1970s did not automatically translate into genuine environmental protection efforts in the South as the region was more concerned about economic development and poverty issues.

For example, for most of the 1970s, environmental efforts in China were overshadowed by Mao's environmentally destructive development philosophy which was still widely embraced by the Chinese government. This was evidenced by the increasingly acute environmental pollution, including air and water pollution, that prevailed in the 1970s amidst rapid industrial development (Wang, 1989; Mu et al., 2014; Delang, 2016; see also, Sections 3.13.2 and 3.18). It may well be that Mao's Great Leap Forward in the 1950s saw an era of extreme human interference and transformation of nature. The traditional Chinese environmental ideal of "harmony between heaven and humans" was abrogated in favor of the slogan "Humans Must Conquer Nature" which exerted immense influence on human environmental attitudes and the magnitude and impact economic activities during the Maoist period (Shapiro, 2001). Thus no significant environmental regulations were enacted following Stockholm until the reformist Deng Xiaoping firmly took the political helm in 1978 (Kapur, 2015, see Sections 3.13.1 and 3.17).

Deforestation in Southeast Asia in the same period had also become increasingly environmentally destructive despite having various environmental protection and resource management regulations in place (Sodhi et al., 2004; Choy 2015a, 2015b, 2018, 2019; see also, Section 3.12). In India, the environmental legislation enacted after Stockholm were, to a great extent, mere rhetoric and ineffective in reality because the government was reluctant to enforce laws which would inhibit industrial growth (Chandra, 2015). Indeed, in India, even basic laws concerning urban planning and fundamental hygiene and public health were hardly implemented (Dembowski, 2001). In Brazil, it would seem that the Stockholm Conference had failed to make an impact on the alarming rates of deforestation in the Amazon forest in the 1970s caused by uncontrolled commercial ranching activities (Sawyer, 1998; see also, Sections 3.10.3 and 3.10.4).

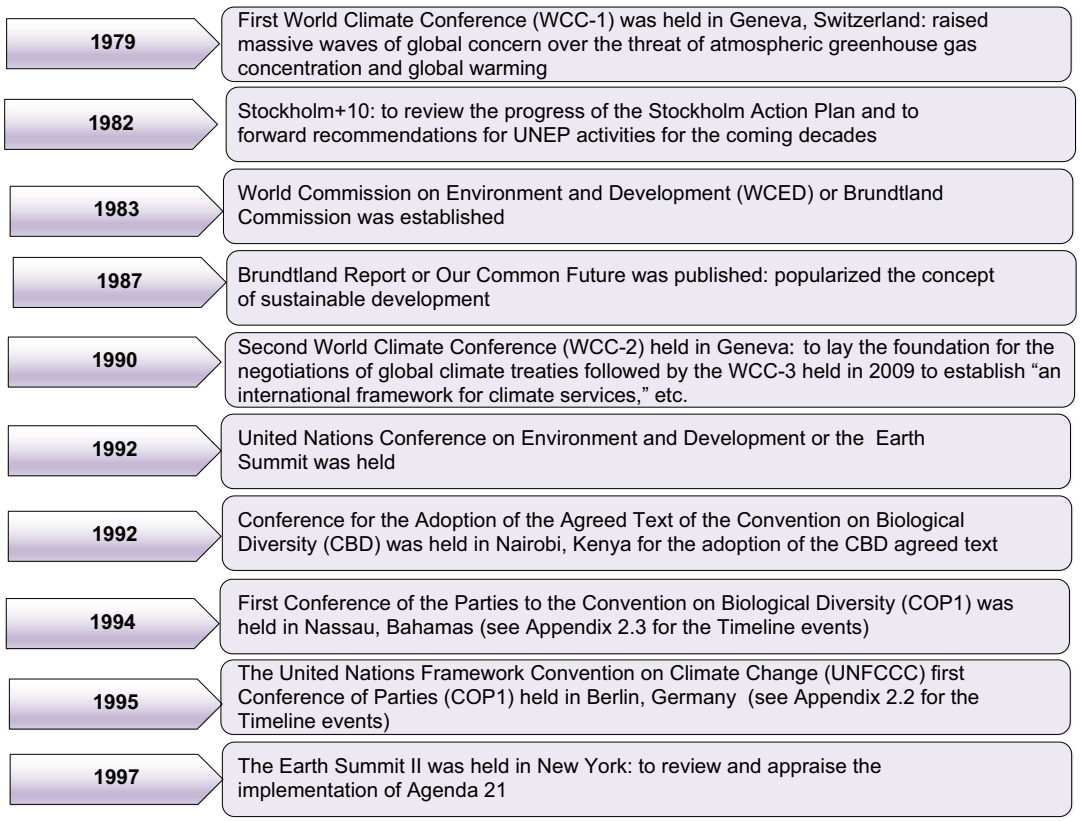
Despite this, it is however fair to say that the Stockholm Conference did successfully raise global environmental awareness. It has put the environment permanently on the international political agenda, marking the coming of age of the green evolution of global environmental regimes in the latter part of the United Nations sustainable development history. More importantly, the Stockholm Declaration adopted at the Conference constitutes the first body of rules with goals to protect the essential components of the environment which are considered as a "global public good" (Chechi, 2016: 217).

It may be noted that we need to assume a response lag to the Stockholm impacts. Between the time a participant country enacts environmental policies or regulations and the point at which these are implemented may be short or long depending on the efficiency of political institutions, the socioeconomic conditions, and the speed of development in the country concerned. Also, proper implementation of the environment polices may take place gradually, rather than abruptly as there is a learning period to adhere to. Thus it is no surprise that the Stockholm Conference could hardly be said to have made waves in driving real movement for halting unsustainable development practices across the globe, especially in the South in the 1970s, as shown earlier.

Our analysis will now proceed with determining whether the United Nations' efforts in the postStockholm era have made any advance in greening the global economic system in harmony with the natural world.

2.9 The postStockholm era: The second wave of United Nations engagement with environmentally sustainable development

As examined below, in the follow-up to the Stockholm Conference, a series of summits and conferences were held and hundreds of environmental documents were adopted. These were held to sustain the momentum of the Stockholm call for eco-development, and to raise international awareness of the looming environmental threats such as climate change, as well as to review environmental progress, and to reinforce global commitment to environmental sustainability (Timeline 2.2).



TIMELINE 2.2 The second United Nations wave of environmental sustainability.

2.9.1 The first World Climate Conference (1979)

The first World Climate Conference (WCC-1), convened by the World Meteorological Organization (WMO), in collaboration with the United Nations Educational, Scientific and Cultural Organization(UNESCO), the Food and Agriculture Organization of the United Nations (FAO), the World Health Organization, the UNEP, International Council for Science (ICSU) and other scientific partners, in 1979 in Geneva, Switzerland, for example, raised massive waves of global concern over the threat of atmospheric greenhouse gas (GHG) concentration and global warming caused by uncontrolled human economic activities (Zillman, 2009). The Conference created the urgency for deep reform and mitigating policies to address the problem (Appendix 2.1). Subsequent to this, the World Climate Program (WCP) was created to provide a framework for international cooperation in research on climate issues including ozone depletion. The WCP was followed by the Vienna Convention for the Protection of the Ozone Layer (1985) and the establishment of the Intergovernmental Panel on Climate Change (IPCC) in 1989 (Appendix 2.1). This was followed by the publication of the IPCC First and Second Assessment Reports in 1990 and 1995 (Appendix 2.1).

Following the WCC-1, the WCC-2 was also held in Geneva in 1990 under the sponsorship of WMO, UNESCO, UNEP, FAO, and ICSU. The Conference adopted the WCC-2 Ministerial Declaration—an important document that set the essential parameters for negotiation and establishment of the United Nations Framework Convention on Climate Change (UNFCCC) (Zillman, 2009). This laid the foundation for the negotiations of global climate treaties as discussed in the subsequent section.

The WCC-3 was held in Geneva under the theme, "Climate Prediction and Information for Decision Making" in 2009. Its focus was to establish "an international framework for climate services that links science-based climate predictions and information with the management of climate-related risks and opportunities in support of adaptation to climate variability and change in both developed and developing countries" (GFCS, 2009a: 3) The WCC-3 High Level Declaration was adopted at the Conference which aimed to establish a Global Framework for Climate Services to strengthen production, availability, delivery, and application of science-based climate prediction and services, among others (GFCS, 2009b: 3)

2.9.2 Stockholm +10 (1982) and the Brundtland Report (1987)

Ten years after Stockholm, the UN Environment Program convened a special Stockholm +10 Conference in 1982 in Nairobi to review the progress of the Stockholm Action Plan and to forward recommendations for UNEP activities for the coming decades (Selin and Linnér, 2005). The Conference which expressed "serious concern about the present state of the environment" revealed that progress made by governments in addressing major environmental issues had been slow and that the Stockholm Action Plan had only been partially implemented. The Nairobi Declaration adopted at the Conference reaffirmed the principles of the Stockholm Declaration and called on the international community to intensify environmental protection efforts. It also proposed the establishment of the World Commission on Environment and Development (WCED), also known as the Brundtland Commission, in 1983 as an independent commission under the Norwegian Prime Minister Gro Harlem Brundtland, to propose long-term environmental strategies for "the achievement

of common and mutually supportive objectives which take account of the interrelationships between people, resources, environment and development" (United Nations, 1983). This paved the way for the publication of the Brundtland Report or *Our Common Future* in 1987.

The Brundtland Report may be regarded as a green effort to crystallize the conservationist thinking in early environmental sustainability literature such as the three landmark publications, namely, *Limits to Growth* (Meadows et al., 1972), *A Blueprint for Survival* (Goldsmith et al., 1972) and *Small is Beautiful* (Schumacher, 1973), and the idea of "Only One Earth" that was promoted at the 1972 Stockholm Conference, the Founex Report, and the Cocoyoc Declaration. In the sphere of environmental conservation policy, the Report is considered an ideological document that summarized and conceptualized major ecological strategies emerging during the green decades of the 1960s and 1970s. These include the Common Heritage of All Mankind first introduced in the 1960s, Man and the Biosphere Program (1971), the World Heritage (1972), World Conservation Strategy (1980), the World Charter for Nature (1982), (Larsson, 1999), and "eco-development," a major theme of discussion at the United Nations Conference on the Human Environment (the Stockholm Conference) held in 1972.

The Brundtland Report popularized the concept of sustainable development which was formally introduced in the World Conservation Strategy. Defining sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs," the Report placed great emphasis on the concept of intergenerational equity as well as the need to protect the natural resource base and the natural environment while promoting economic growth (WCED, 1987: 43). This is to ensure that future generations will not be worse off than the present generation in terms of resource endowment. To achieve this, the Report calls for the need to observe the physical limits and biophysical constraints to development.

More specifically, it states that development would be guided by the "ability of the biosphere to absorb the effects of human activities" (WCED, 1987: 8). That is to say, humans in the present generation owe a moral responsibility to the future generations to exercise prudent use of the natural environment within its environmental sustainability thresholds (the Holling concepts of sustainable resource-use) to fulfil the principle of intergenerational equity. The Report placed the environment in the political context and generated a second wave of United Nations engagement for a rapid global transition to a more environmentally sustainable world. The Report recommended convening another UN Conference that would bring together both the environment and development agendas under one roof. Here, it may be noted that while sustainable development as used in the World Conservation Strategy is more concerned about ecological sustainability and less concerned about economic growth, the Brundtland concept of sustainable development places its focus on reconciling both while promoting social equity.

The Brundtland concept of sustainable development may be regarded as a global refinement and expansion of eco-development as used in the 1970s such the Cocoyoc Declaration which defined eco-development as "ecologically sound socioeconomic development (eco-development) at the local and regional level" in the developing South (UNEP and UNCTAD, 1974: 900). In acknowledging that "environment" and "development" are inseparable, the concept of sustainable development under Brundtland's perspective entailed the integration of

development and environment in policies in all countries, industrialized and developing alike. While the concept of eco-development had failed to enter into the mainstream of the larger policy community, the Commission deliberately defined and embedded the notion of sustainable development within such a wide scope that it has been able to gain recognition by economists, policy-makers, politicians, social groups, and the public at large. As a result, the Brundtland concept of sustainable development became a central theme of the environment and development discourse in the 1980s (Selin and Linnér, 2005).

2.9.3 United Nations Conference on Environment and Development (The Earth Summit, 1992)

In response to the recommendation of the Brundtland Commission, the United Nations convened the Earth Summit in Rio de Janeiro, Brazil, in 1992 "to help Governments rethink economic development and find ways to halt the destruction of irreplaceable natural resources and pollution of the planet" (United Nations, 1997a). The summit was unprecedented both in terms of its size and scope of concern. It was attended by 172 heads of state and government and some 2400 representatives of nongovernmental organizations (NGOs), while 17,000 people attended the parallel NGO Forum (United Nations, 1997a). The summit laid the foundation for the global institutionalization of sustainable development through the adoption of the following crucial documents which commit the world to promoting sustainable development:

- **i.** The Rio Declaration and Development—a program of action spelling out 27 guiding principles for the management of natural resources and the environment.
- **ii.** Agenda 21—a 40-chapter and 800-page agreement laying down 115 specific programs to help achieve sustainable development.
- **iii.** The Forest Principles or "Non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests"—a brief document containing 15 principles to guide the management, conservation, and sustainable development of all types of forests.
- **iv.** The United Nations Framework Convention on Climate Change (UNFCCC)—an international treaty for global cooperation to combat climate change by limiting the emission of GHGs.
- **v.** Convention on Biological Diversity (CBD)—a legally binding multilateral agreement with three main goals: conservation of biodiversity; sustainable use of biodiversity; fair and equitable sharing of the benefits arising from the use of genetic resources. Its overall aim is to protect the diversity of species and habitats in the world.
- **vi.** The United Nations Convention to Combat Desertification (UNCCD), adopted on June 17, 1994 and entered into force in 1996, led to a global and legally binding coalition between developed and developing countries to combat desertification (Kutter, 2009). The principal objective of UNCCD (objective 1) is to "combat desertification and mitigate the effects of drought, particularly in Africa," thus contributing to long-term sustainable development.
- **vii.** Following (vi) above, in recognizing land degradation/desertification as a threat to environment and the very base of sustainable livelihood in many countries especially in the arid, semi-arid and dry sub-humid areas around the world, the United Nations

Annex 533

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Human Adaptation to Coastal Hazards in Greater Bridgetown, Barbados

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As urban risks associated with a changing climate continue to intensify, it is increasingly important to broaden our understanding of climate vulnerabilities in coastal cities and human adaptation to climate-related hazards. Coastal cities in small island developing states in the Caribbean stand to be among the most climate-impacted. This paper explores vulnerability to coastal hazards (sea-level rise, storm surges and flooding) in Barbados' capital city and its urban corridor—Greater Bridgetown. Specifically, it is a qualitative survey of climate change vulnerabilities and human adaptation in the study domain that is underpinned by three research questions: 1) In what ways is Greater Bridgetown vulnerable to coastal hazards? 2) What are the human dimensions of this vulnerability? and 3) What are the associated human adaptations? We apply a four-component adaptive urban governance framework to explore the role of the city's historical development, urban morphology, national-level institutions and relevant government and other stakeholder initiatives in shaping, reducing and/or increasing vulnerability to coastal hazards. The paper relates primarily to the governance dimension of the risk reduction framework articulated by the Intergovernmental Panel on Climate Change. In totality, a case is presented that highlights Greater Bridgetown's capacity for coastal/urban resilience, but which cannot be maximized without institutional prioritization of vulnerability, increased stakeholder "buy-in" and participation, along with significant investment in adaptation and the protection of valuable coastal infrastructure. The findings are of relevance to human adaptation within coastal cities of small island developing states.

Keywords: Caribbean, city, human adaptation, global climate change, inundation, resilience

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INTRODUCTION

Climate change is expected to have a global impact, but it is well understood among climate change scientists that coastal cities in small island developing states (SIDS) in the Caribbean stand to be among the most climate-impacted in the world (Mycoo and Donovan, 2017). SIDS across the globe face several climate-related hazards that place their resources, populations and assets at serious risk (Robinson, 2017; Robinson, 2018; Hay et al., 2019). The level of exposure to climate hazards varies from territory to territory based on factors such as population distribution, island type, and topography, all of which provide a framework when considering vulnerability (Forbes et al., 2013). Several studies on the Caribbean confirm their settlements have been impacted by sea-level rise (SLR), heavy precipitation events, tropical cyclones, and storm surges, among other climate

risks (Nurse et al., 2014; Cashman and Nagdee, 2017; Mycoo and Donovan, 2017; Mycoo, 2018). At the century scale and if adaptation is not pursued, the vast majority of low-lying islands, coasts and communities will encounter substantial risk from coastal hazards regardless of their level of development (Oppenheimer et al., 2019). Oppenheimer et al. (2019), p. 48 indicated that "even a small increase in mean sea level can significantly augment the frequency and intensity of flooding. This is because SLR elevates the platform for storm surges, tides, and waves, and because there is a log-linear relationship between a flood's height and its occurrence interval." Other studies suggest that the impact of sea-level changes on the settlements and infrastructure of small islands is proportionately greater than larger landmasses in part because of longer coastlines per unit of land area (Nunn and Kumar, 2018). In SIDS, major settlements tend to be located on the coast making them more exposed and more sensitive to climate-related hazards. For example, capital cities in the insular Caribbean are located on the coast and the majority are port cities (Cashman and Nagdee, 2017). Apart from high urban densities, the level of urbanization is very high in coastal areas in the Caribbean given that the population is attracted to flat lands, which generally cost less to build on when compared with hilly areas (Mycoo and Donovan, 2017; Mycoo, 2018).

Climate change has increased the intensity and spatial patterns of coastal hazards faced by Caribbean cities such as Bridgetown (Barbados), Georgetown (Guyana), Port of Spain (Trinidad and Tobago), Kingston (Jamaica), and Castries (St. Lucia) (Mycoo, 2014; Mycoo, 2017; Mycoo and Donovan, 2017). These cities are all located on the coast and the coastal hazards experienced include SLR, heavy precipitation events, tropical cyclones, and storm surges, and flooding. Based on various SLR models, it is projected that almost all coastal infrastructure in the Caribbean, including port and harbor facilities, will experience inundation in the future (Nurse, 2015; Cashman and Nagdee, 2017; Nurse, 2017). Climate-driven impacts on island infrastructure have been experienced for some time and are likely to become more widespread and more economically challenging in the next few decades (Robinson, 2017; Monioudi et al., 2018). Coastal flooding where there is a high concentration of population, infrastructure and economic assets, in particular, presents individuals, households, communities, and policy- and decision-makers in the region with numerous challenges, including effectively adapting to its impacts.

A systematic review of climate adaptation actions across all SIDS by Robinson (2020a) concluded that climate change impacts and adaptation responses in Caribbean SIDS are understudied. This paper seeks to help close this research gap. It qualitatively surveys climate change vulnerabilities in Greater Bridgetown (Barbados' capital city and its urban corridor) in seeking to understand human adaptation to coastal hazards (SLR, storm surges and flooding) within a SIDS context. We see human adaptations as the adjustments of human systems in response to actual/expected climatic stimuli, or their effects or impacts, that moderate harm, or exploit beneficial opportunities associated with climate change (IPCC, 2014, p. 1758). Three research questions underpin our enquiry: 1) In what ways is Greater Bridgetown vulnerable to coastal hazards? 2) What are the human dimensions of this vulnerability? and 3) What are the associated human adaptations? A four-component adaptive urban governance framework is applied to explore the role of the city's historical development, urban morphology, national-level institutions and relevant government and other stakeholder initiatives in shaping, reducing and/or increasing vulnerability to coastal hazards. The remainder of the paper is divided into four main sections. In the first section, materials and methods used are presented. Within this, Barbados' geography and its vulnerability to coastal hazards are covered. The adaptive urban governance framework is described, as well as how data were collected and analyzed. The second section presents the results, following the application of the adaptive urban governance framework, and which are organized according to the framework's four components. In the third section, presents a discussion in view of the three research questions. The fourth and final section highlights the paper's major empirical insights, which are that 1) vulnerability to coastal hazards in an urban landscape is linked to the city's historical development (temporal scale), and to its urban morphology (spatial scale), 2) that this vulnerability is further linked to its governance, particularly the institutions, laws, policies and plans that are in force, 3) that this vulnerability is significantly reduced where there are synergies between formal and informal governance, and 4) socio-political engagement is an essential component of human system adaptation in an urban landscape. Based on these insights, this paper contributes to the discourse on global responses to climate change and helps highlight the relevance and urgency of human adaptation within coastal cities in SIDS.

MATERIALS AND METHODS

Barbados' Geography and Its Vulnerability to Coastal Hazards

Barbados is a small island in the Caribbean with a land mass of 430 km^2. It is one of the top 20 most densely populated countries in the world with an estimated 2020 population of 287,375 persons and a density of 668 persons per km^2 (see **Figure 1**). Topographically, it is a relatively flat island—the highest point is 334 m above sea-level at Mount Hillaby in the Scotland District—this makes its coastal zone vulnerable to SLR, storm surges and flooding. The projections of higher sea-levels and increased tropical storm activity are expected to increase storm surge frequency and intensity. The main impact of storm surge is flooding, and because of Barbados' generally low-lying topography, it has been estimated that storm surge flooding events could extend over 150–300 m inland (Nurse, 2011). Barbados experiences flooding during the rainy season (June-November) when heavy precipitation over a short period places pressure on drainage channel capacity to cope with rapid surface water runoff, but storm surges also contribute to flooding, though mainly in coastal areas. On November 29, 2016, for example, the island experienced severe flooding resulting from a combination of a trough system and the Inter Tropical Convergence

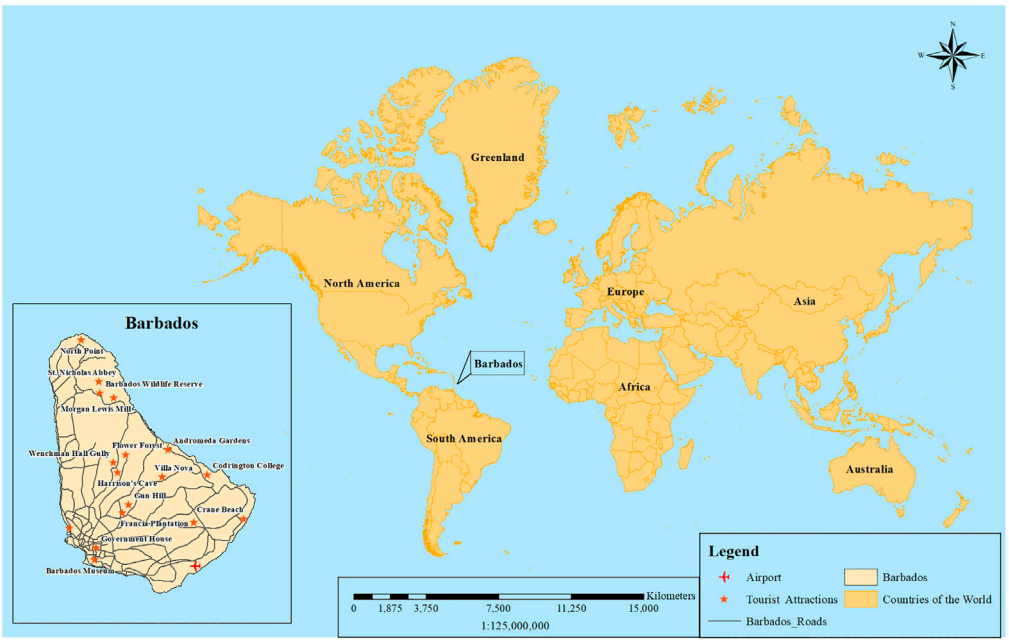


FIGURE 1 | Map of Barbados in relation to major geographical regions of the world (source: Rajesh Doodlal).

Zone, which generated intense showers lasting for just a few hours. The rapid onset and speed of travel of water from the central regions to the coast provided evidence of the vulnerability of infrastructure and settlements to the impacts of extreme events. There were several reports of property inundation and damage to vehicles where culverts were inadequate to channel this magnitude of storm water along regular courses to outfalls along the shoreline (Government of Barbados, 2018).

The majority of the country's population, coastal infrastructure and human settlements are located in the Low Elevation Coastal Zone (LECZ), which is the land area that is contiguous to the coastline up to a 10 m rise elevation. With rapid urbanization occurring within Barbados' LECZ, the country is especially vulnerable to SLR, storm surges and flooding. An estimated 18% of land mass in Barbados forms a part of the LECZ. Approximately 47,000 persons and 24% of human settlement occupies this zone (Columbia University, 2011). The concentration of socio-economic infrastructure within the LECZ multiplies the vulnerability of the economy to climate change and its impacts. Flooding, in particular, is a major risk for persons living in Barbados' coastal zone—it impacts the health and safety of the population, as well as the security of freshwater supplies (Cashman et al., 2010), buildings and infrastructure. Historical flood records reveal that social, protective and institutional facilities such as churches, cemeteries, government buildings, post offices, petroleum storage facilities, police stations and schools have all been damaged by flood waters. Infrastructure such as the Port of Bridgetown, bus terminals, and power stations are also affected annually by flood waters. Major transportation arteries, for example, Highway 1 and Highway 7, two of the island's coastal highways that run along the north and southeast urban corridor extending from Bridgetown, are located in the LECZ, and in several areas, are especially vulnerable to SLR, storm surges and flooding. **Figure 2** shows Holetown and Trent which are in the LECZ and climate change 25-year flood events and impacts based on various climate change scenarios.

With the impact from flooding and other natural and human factors, economic growth has been largely subdued over the last few years. In 2018, the Barbadian economy slipped into recession (Economic Commission for Latin America and the Caribbean (ECLAC, 2019). Nevertheless, tourism continues to be the economic mainstay, resulting in an increased dependency on a climate-sensitive sector. In 2018, this sector accounted for 22% of Barbados' gross domestic product (Government of Barbados, 2018). Tourism facilities such as hotels, guest houses, restaurants, bars and beachfront properties are located in areas prone to SLR, storm surges and flooding (Mycoo, 2006; Cashman et al., 2012; Mycoo and Chadwick, 2012; Scott et al., 2012; Mycoo, 2014). The hotels in Barbados, especially the larger ones, are on average located within the LECZ, which is consistent with the 1 in 100 inundation zones, placing them at risk of major structural damage associated with SLR, storm surges and flooding. Earlier studies reveal that approximately 90% of the island's hotels are located within 1 km of the high water mark and less than 20 m above sea-level (Belle and Bramwell, 2005; Dulal et al., 2009). Other studies, however, show that an estimated 50% of the hotel rooms in Barbados are at risk from a Category 3 hurricane because of their proximity to the mean sea-level. Becken and Hay (2008) estimate replacement costs of hotels could be up to US$550 million. Although its geographic location is an advantage in that it lies outside the Atlantic hurricane belt, the island does

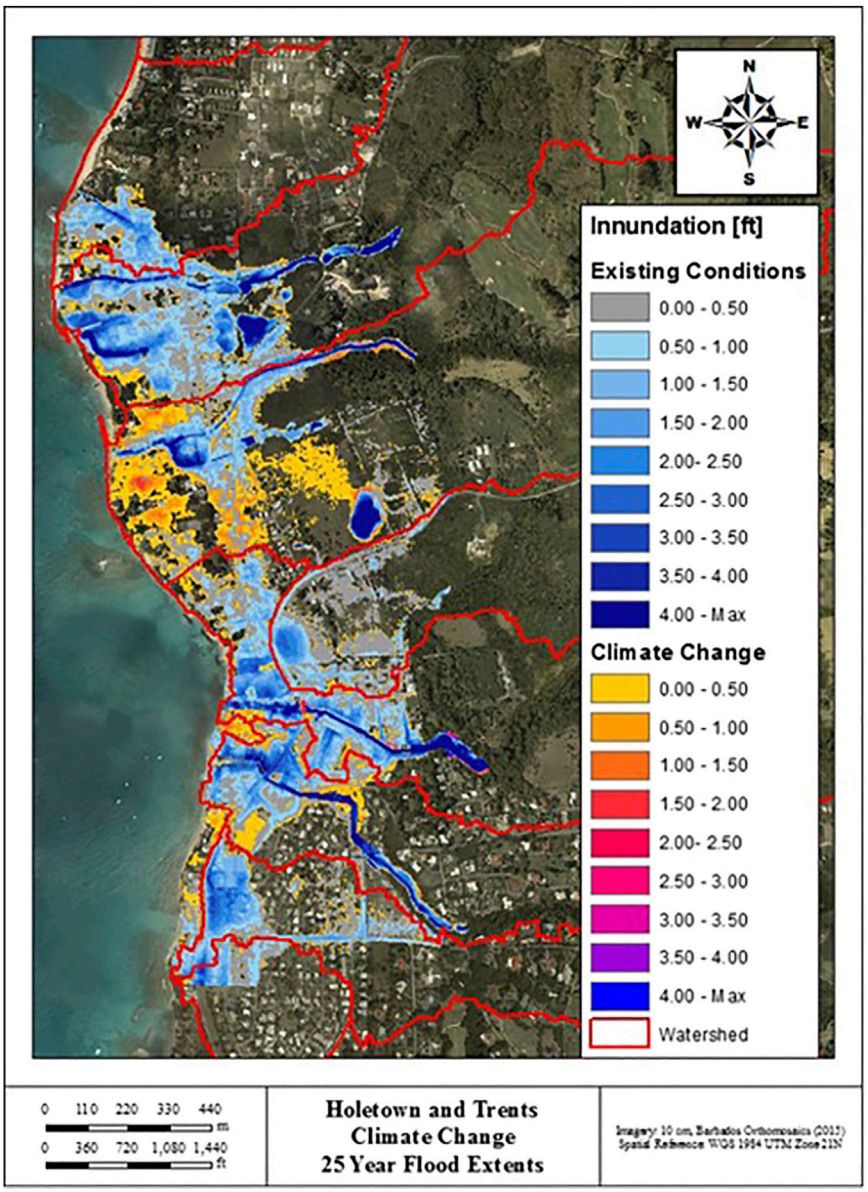


FIGURE 2 | Low Elevation Coastal Zone and Flooding in Holetown and Trent based on Climate Change Scenarios (source: Baird 2016).

not experience hurricanes as frequently as other Caribbean islands, but it is nevertheless exposed to major storms (Nguyen and Robinson, 2019).

Theorizing Vulnerability to Coastal Hazards in a Small Island Developing States Context

The demographic characteristics of Barbados are unique in contrast to other Caribbean islands in terms of population density, and the percentage of the population living in urban areas and along the coast. An estimated 44% of the population lives in urbanized areas, with the majority of persons settled in Bridgetown–a coastal city. The remaining population lives in other coastal areas, towns and villages, especially those located on the south and west coasts of the island (Government of Barbados, 2018). Currently, the majority of the population lives within three coastal parishes on the south-east, south and west coasts of the island which also support the four main urban centers—Bridgetown, Speightstown, Holetown and Oistins. Further, 25% of the population lives within 2 km of the coast in an "urban corridor," which runs along the entire length of the west and south coasts, and the parishes of St. Phillip, Christ Church, St. Michael, St. James, and the southern reaches of St. Peter. These areas constitute Greater Bridgetown (See **Figure 3**).

To understand Greater Bridgetown's vulnerability to coastal hazards (SLR, storm surges and flooding) and the associated human system adaptations, we apply an adaptive urban governance framework. Urban governance systems need to be

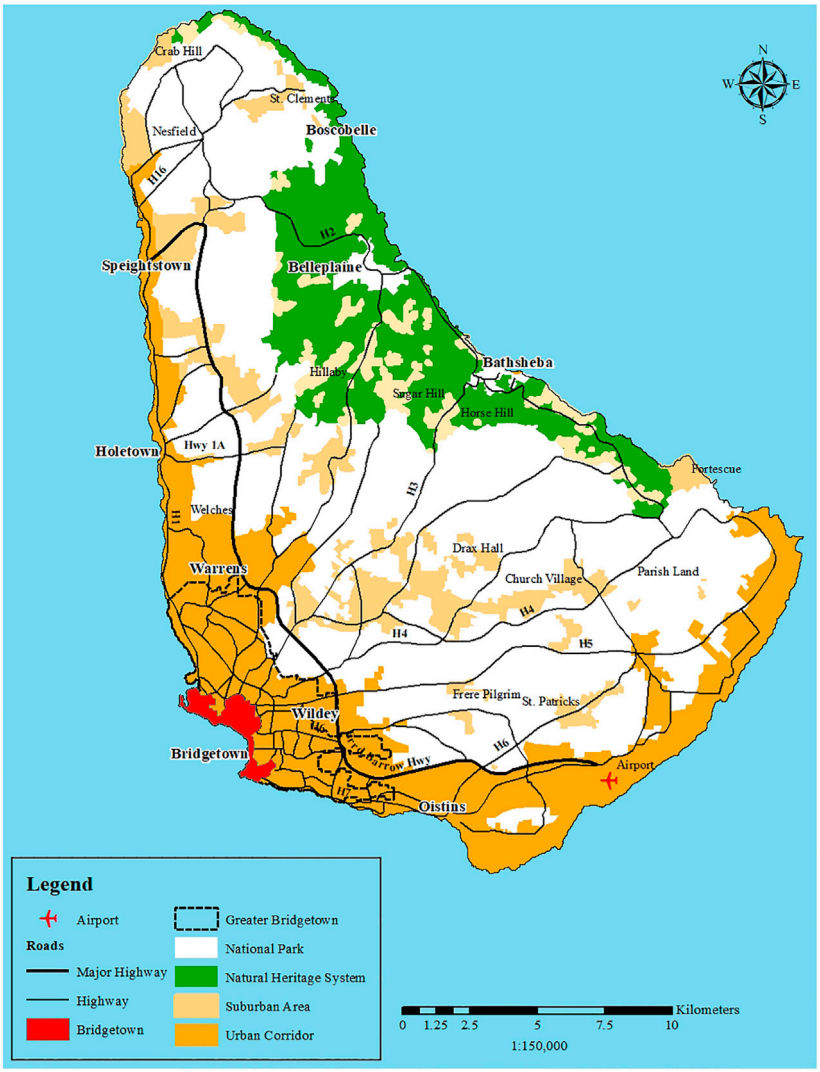


FIGURE 3 | Map showing the Four Main Urban Centers which constitute Greater Bridgetown (source: Rajesh Doodlal).

adaptive in order to deal with emerging uncertainties, dynamics, and pressures, including those related to climate change (Patterson and Huitema, 2019). Here, we understand "governance" as referring to the "institutional arrangements which shape actors' decisions and behavior, including the exercise of authority within groups or organizations" (Hatfield-Dodds et al., 2007, p. 4). Cities across the globe, as spatial groups, face multiple, interrelated and increasing climate change risks. In the Global South, including in the Caribbean, these risks arise within contexts that frequently involve substantial existing socio-economic inequalities and differential vulnerabilities (Bulkeley et al., 2014). Realizing adaptive urban governance systems requires that attention is paid to institutions, and in particular, processes of institutional innovation, if they exist. While scholars such as Patterson and Huitema (2019) develop multi-level heuristics to evaluate the role and effectiveness of institutions in urban adaptation governance, for example examining changes in institutional arrangements, rules-in-use and broader governance dilemmas, we reinterpret an earlier framework used in Birkmann et al. (2010). Our reinterpretation has four main components. Together, they offer an opportunity to conduct an in-depth analysis of urban adaptation processes, strategies and measures in Greater Bridgetown.

The application of the first component of our framework allows us to identify the "everyday" hazards in Greater Bridgetown through an interrogation of key threats, particularly in relation to the city's coastal assets. The second component explores the linkages between temporal and spatial scales, drawing attention to the historical, geographical and contemporary structural and non-structural adaptation processes, strategies and measures. This also enables us to comment on the robustness and flexibility of adjustments made in the human systems in response to actual/expected

climatic stimuli, or their effects or impacts, that moderate harm, or exploit beneficial opportunities associated with climate change. The third component identifies the synergies between formal and informal governance processes and strategies. It allows us to address their potential effectiveness and secondary consequences as well as flag areas of potential conflict that could inhibit adaptation progress. The fourth component assesses the integration of expert and local knowledge. In a cursory way, we also look at tipping points and whether the urban landscape can cope and adapt to stresses beyond certain thresholds. Our framework, though it modifies Birkmann et al. (2010), takes an integrative approach to studying the primary urban governance system in Barbados, with broader implications for other coastal cities in the Caribbean as well as other SIDS regions.

Data Collection and Analysis

Primary and secondary data were collected between September 2019 and July 2020. We used a directed approach to analyze the content of text and image data in order to derive historic and contemporary indicators of coastal hazard risks (SLR, storm surges and flooding) in Greater Bridgetown. Content analysis is a widely used qualitative research technique (Hsieh and Shannon, 2005). The directed approach is part of a naturalistic paradigm and is one of three distinct approaches to content analysis—it starts with a theory or relevant research findings as guidance for initial codes (Hsieh and Shannon, 2005). In our case, we were guided by the adaptive urban governance framework we described above and, therefore, focused on identifying 1) "Everyday" hazards associated with the city's coastal assets, 2) Trends in the city's historical development and urban morphology that shape its vulnerability, 3) Formal and informal institutions, policies and plans for managing climate risk and adaptations, and 4) The role of and the adaptation actions undertaken by experts in the central government vis-a-vis local residents. Text analysis drew from government documents and United Nations publications. Government documents included policies and plans related to physical planning, climate change, coastal zone management, sustainable land management, and urban heritage and conservation. United Nations publications focused on the economic impact of climate change on tourism and other sectors. We conducted a site visit in May 2020 to collect photographic evidence of the impacts of coastal hazards as well as human adaptations along the urban corridor. Some of the images produced by Barbados' government agencies were used to analyze flooding in Greater Bridgetown. By studying how Greater Bridgetown's coast is vulnerable to SLR, storm surges and flooding, this paper contributes to an understanding of the city's climate vulnerability. In applying an adaptive urban governance framework and selectively drawing on key coastal assets to illustrate examples, this paper helps assess the various dimensions of Greater Bridgetown's coastal vulnerability in order to identify how the city and its population can increase their resilience to immediate and future climate threats.

RESULTS

Framework Component 1: Acknowledging "Everyday" Hazards: Bridgetown and its Key Coastal Assets

Bridgetown is located in the urban parish of St. Michael on the southwest corner of Barbados. The city has 4.28 km of coastline and has several coastal assets, including the Bridgetown Deepwater Harbor, Careenage, Carlisle Bay, and the UNESCO World Heritage Site (See **Figure 4**). Built in 1961, the Deepwater Harbor is the Caribbean's most trafficked deepwater harbor. In 2018, the harbor facilitated 80% of Barbados' imports, 437 cruise ships, and approximately 830,000 cruise passengers (Hinkson, 2019). Located 1.75 km southwest of the Deepwater Harbor is the current Careenage—a commercial and recreational boat park, and iconic boardwalk that attracts locals and tourists (Google Earth, n.d.; Smith and Watson, 2008; Town and Country Development Planning Office (TCDPO), 2017). The city's main natural asset, Carlisle Bay, makes up nearly half of Bridgetown's total coastline and includes unique beaches and reefs (MPAtlas, n.d.). Tourism, residential, and government buildings line the Bay (Town and Country Development Planning Office, 2017a). Given the city's unique mix of old and new buildings, Historic Bridgetown, including its Garrison was declared a UNESCO World Heritage Site in 2011 (Government of Barbados, 2011). These four coastal assets are at risk of SLR, storm surges and flooding. The Bridgetown Deepwater Harbor and the Careenage are used to illustrate this point below.

The Bridgetown Deepwater Harbor represents the primary economic coastal asset of the city—it is most proficient for the transport of passengers from transnational cruise liners. The Harbor handles the most tourists per year in the Caribbean, supporting a vibrant tourism industry across Bridgetown (Government of Barbados, 2018). An assessment of the economic impact of climate change to Barbados' tourism industry found cruise ship facilities were damaged by [SLR], storm surge, coastal erosion and extreme weather events (Monioudi et al., 2018). These risks "will translate into costly [structural] repairs and potential loss of livelihoods. It was predicted that severe damage that requires such facilities to be completely closed will result in a decline in revenue from cruise tourism" (ECLAC, 2011). Increased average temperatures of 1.5°C will reduce the number of workable days for the Harbor along with other deepwater ports across the region (Monioudi et al., 2018). This assessment highlights an area of extreme concern regarding the accommodation and attraction of fewer tourists. Threats of coastal inundation from SLR, storm surges, flooding, and coastal erosion are obvious threats to the Harbor as it represents the intersection of a series of essential economic activities for the city of Bridgetown and its urban corridor.

The Careenage represents an area of high concentration of service infrastructure, including the Queen Elizabeth Hospital, the country's main hospital and two bus terminals. The local landmark and engineering antiquity are identified as an at-risk

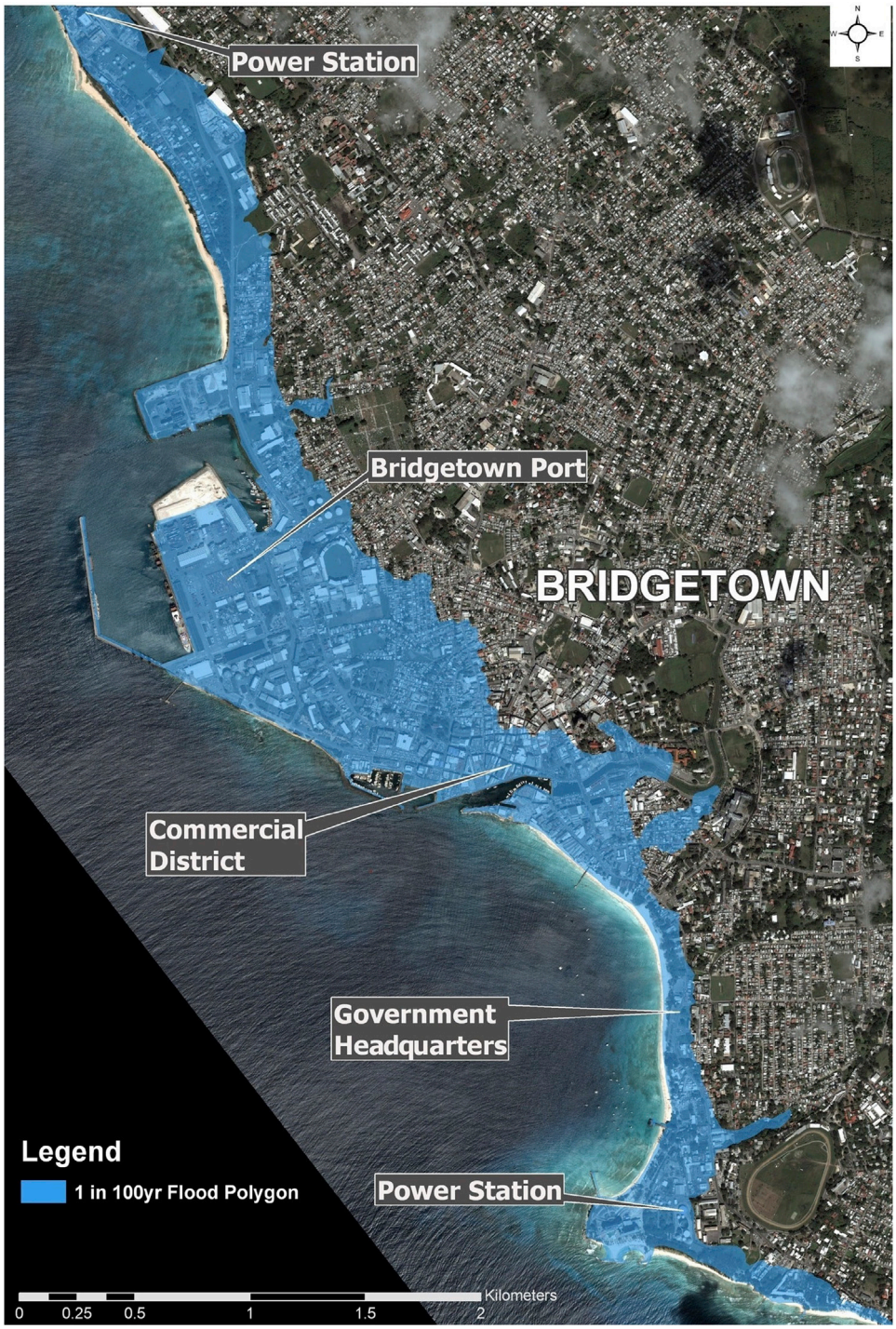


FIGURE 4 | Flood hazard map of Bridgetown showing some of the key coastal assets (Coastal Zone Management Unit, Government of Barbados).

coastal asset. The most direct impact of climate change on the Careenage and the downtown area is flooding (Government of Barbados, 2018). Inundation of this asset arising from SLR, storm surges, flooding, or extreme weather events has the potential to significantly disrupt economic and social activity. The lack of drainage infrastructure in the city, will intensify these issues , despite the city's Integrated Management Plan, which presents a case for "the redevelopment of the Constitution River for amenity and flood resilience purposes in the coastal floodplain of Bridgetown".

The results revealed the risk-focused decision by Bridgetown's institutions considers the future impacts, and the intensification

of climate change in the city. Flooding is an understood risk across these and other coastal assets. As a result of this, building institutional capacity to provide and maintain adaptive flooding infrastructure is crucial for the city.

Framework Component 2: Linking the Temporal and Spatial Scales: Historical Development and Urban Morphology

Historical Development

The land that Bridgetown is settled on was once a swamp, and prior to the arrival of British colonists, the area surrounding Carlisle Bay consisted of beach deposits and was covered with mangroves and other salt-tolerant trees and shrubs (Smith and Watson, 2008). Archaeological findings from the areas that are now Fontabelle, Spring Garden, and the Careenage indicate Amerindian settlement in and around Bridgetown dating back to 1623 BC. Amerindians in Bridgetown were subsistence farmers and fishers, utilizing slash and burn farming techniques that resulted in a landscape of small clearings of virgin forests, located close to the coastline. Archaeologists estimate that Amerindians numbered tens of thousands prior to the complete decimation of their population by 1,550 at the hands of Spanish colonizers.

Following the Spanish and Portuguese, who made stops on the island for water during the 16th Century, English ships landed in 1624, and Bridgetown was settled in 1628, which marked the beginning of a period of British colonization, spanning four centuries and most notable for its maritime development. Bridgetown's Careenage offered a safe, natural harbor for vessels and hosting dock facilities for shipbuilding and maintenance. Initially, society centered around small-scale cultivation of cotton and tobacco; rapid growth of Bridgetown and poor urban planning followed immediately. The streets were not planned on a grid system like those of the Spanish colonial towns, and a uniform organization style for the town that existed in other British settlements in the Americas was non-existent (Smith and Watson, 2008).

In 1640, the sugar trade was introduced to Bridgetown making it the center of international trade in the British Americas and one of its largest cities by the late 17th Century. The sugar trade brought even more rapid urban growth, and this, combined with Bridgetown's initial poor urban planning, resulted in limited sanitation, congested roads, disease, and fire. To address this, the Government introduced legislation to maintain public highways and formalized the city's boundaries in 1657 and 1660, respectively (Smith and Watson, 2008). However, fires continued to ensue. The most notable was the Fire of 1766, which damaged most of the town, and inspired the 1767 Rebuilding Act. The urban plan prepared following the Fire of 1766 greatly informed Bridgetown's present urban morphology—it catalyzed efforts to establish structural uniformity (Welch, 2004) and state control over urban development (Town and Country Development Planning Office, 2017a). From 1800 to 1885, Bridgetown served as the seat of government of the British colonies, and in 1881, the Barbados railway was completed from Bridgetown to Carrington, which contributed significantly to the continued development of the city (Town and Country Development Planning Office, 2017a).

In the early 20th Century, the arrival of the motor vehicle created issues for the narrow streets of Bridgetown. To address this, the Constitution River, Careenage, and remaining swamp areas were filled and then replaced by a channelized canal. This followed the construction of the Bridgetown Deepwater Port in 1961, which created a nexus for trade and communications away from the Careenage. With this construction came the conversion of vacant warehouses into offices, shops, and carparks, creating solid infrastructure for Bridgetown's emerging tourism industry. Barbados gained its independence in 1966, amid a period of high economic growth. Diversification of the economy from the 1950s into the 1970s brought increased settlement to Bridgetown so much so that by 1980, the population of Bridgetown represented almost half (43%) of the country's total (Town and Country Development Planning Office, 2017a). Additionally, a protracted era of colonial settlement and sugarcane cultivation led to the depletion of much of its forested area leaving the island with approximately 84 km^2 (19.5%) of forests. Mangrove loss persisted in the post-colonial period as building activity went ahead on the south and west coasts, and so the only significant remaining mangrove is the Graeme Hall Swamp, which stands on approximately 20 ha (Schueler, 2016).

These historical developments—the settling and filling up of swamplands, unplanned streets, construction of the Deepwater Harbor to facilitate trade and communications, expansion of the modes of transport (e.g., rail)—have all resulted in development in Bridgetown closely aligned to the coast and being highly concentrated in the coastal zone (Government of Barbados, 2018). These leave the city exposed to various coastal hazards, including SLR, storm surges and flooding.

Urban Morphology

Bridgetown's history greatly informs its contemporary urban morphology. In the northwest areas of the city, the urban and historical core combines institutional, residential, and commercial infrastructure, including key coastal assets such as Carlisle Bay and the UNESCO World Heritage Site (Town and Country Development Planning Office, 2017d). The Bay Street Corridor runs adjacent to Carlisle Bay and connects the urban core to southern parts of Bridgetown and the colonial Garrison, the other half of the UNESCO World Heritage Site. Much of the city's tourism infrastructure and government buildings are located along this corridor (Town and Country Development Planning Office, 2017c).

Presently, urban planning is primarily guided by the Town and Country Development Planning Office through the Physical Development Plans it produces (1976, 1991, 2003, 2017). These plans outline development visions for specific areas in Barbados, including Bridgetown and its urban corridor (Government of Barbados, 2008; Downes et al., 2015; Town and Country Development Planning Office, 2017a; TCDPO, 2017a; TCDPO, 2017b). In addition to the key coastal assets, other types of development in Bridgetown's coastal areas include residences and historic sites. While most Barbadians live in chattel homes (i.e., small moveable wooden houses set on

blocks or a groundsill rather than being anchored into the ground), which are typically occupied by lower-income residents, an increasing number are living in planned or multi-storey housing developments (Potter, 2000; McHardy and Donovan, 2016).

Bridgetown's early coastal location and urban morphology resulting from a concentration of population at the city center, and its major role as a port in the core-periphery relationship with England through which sugarcane exports were channelled, drew investments in infrastructure and buildings along the coastal city. This pattern was further entrenched in the postcolonial era when Government investments in offices, transportation upgrade and expansion, tourism and heritage and cultural buildings in the capital city increased, and later on extended to Greater Bridgetown. As a UNESCO World Heritage Site, Bridgetown blends historic and contemporary architecture. Given that the coastal zone is monopolized by the Heritage Site, which includes 30 distinct historic buildings or areas, the Government has increased efforts to redevelop and preserve these historic properties to enhance tourism and protect Barbadian heritage (Inniss, 2012; Downes et al., 2015; Town and Country Development Planning Office, 2017c). Such efforts increase the importance of protecting these areas from coastal hazards, including SLR, storm surges and flooding.

Framework Component 3: Identifying Synergies Between Formal and Informal Governance: From Institutions to Projects

Formal Governance: National-Level Institutions, Policies and Plans to Reduce Coastal Hazard Risk and Support Human Adaptation

Barbados' government is highly centralized. It has a long history of town and country planning, along with a series of national-level institutions, policies and plans that govern the urban landscape. In 1965, the Barbados Town and Country Development Planning Office (TCDPO) published the Town and Country Planning Act (CAP. 240), which has guided development plans for the entire island over the past fifty-five years and includes provisions on planning control and its enforcement. Since then, the Act has been amended multiple times and was recently replaced by the Planning and Development Act, 2019, that was passed in the Senate in January 2019. This Act created a new government department: The Planning and Development Department, which houses the Planning and Development Board, the body responsible for the implementation of the policies outlined in the Act. The Act has five purposes, which encompass the facilitation of land development, the establishment of standards for development, and the incorporation of public participation and easy access to information.

Besides the Town and Country Planning Act (CAP. 240), the TCDPO is also responsible for publishing Physical Development Plans (PDPs). PDPs provide a policy framework for development planning; there are four published PDPs. According to the Barbados National Communication to the United Nations Habitat III Report, the initial PDP was enacted in 1976. This was followed by the second PDP in 1991, a third plan in 2003, and the fourth in 2017. The concept of sustainable development emerged in the 1991 PDP, and governed the 2003 plan entirely (Downes et al., 2015). The PDP of 2017 seeks to address the critical impacts of climate change on Barbados by utilizing appropriate policies and strategies to enable its population to thrive and remain resilient in the face of climatic changes (Town and Country Development Planning Office, 2017a). The need for transformational and foundational change to urgently take action to deal with climate change is articulated in this plan (Town and Country Development Planning Office, 2017a). The 2017 PDP clearly states that one of its main principles is the adoption of adaptation approaches which reflect national and sectoral challenges due to climate variability and climate change. It recognizes existing developmental pressures resulting from demographic changes and investor demands are changing land use patterns, but envision that these must be addressed within the broader context of climate change and sustainable development.

The 2017 PDP recommends several measures to support human adaptation to various coastal hazards in planning decisions, which departs from the hard engineering measures usually employed to minimize such impacts. These risk-informed land use planning measures include the adoption of tree preservation and replacement plans for all development in the Integrated Coastal Zone Management areas; Enforcement of the Tree Preservation Act; tree preservation in Cultural Heritage Conservation Areas; increasing forest and ground cover through the policies of the Natural Heritage System to increase infiltration and rainfall retention in the watershed and to reduce run-off; and improving agricultural practices to reduce run off. The role of individuals and communities in adopting these adaptation options is seen as integral.

In 1985, the Town and Country Planning Act (CAP. 240) presented one early instance of potential climate change adaptation policy by establishing coastal setback lines for construction (Coastal Zone Management Unit (Coastal Zone Management Unit, 2020a). This represented institutional/human adaptation to changing coastal processes. Although the 1991 and 2003 PDPs prepared by the TCDPO introduced and emphasized sustainable development, more notable examples of institutionally promoted adaptation come from the Coastal Zone Management Unit which forms part of the Ministry of Health and Environment. The establishment of the CZMU is one of the earliest in the Caribbean region. The Unit released the Coastal Zone Management Act (1998), which called for a coastal zone management plan. The Integrated Coastal Zone Management Plan articulated comprehensive assessment, setting of objectives, planning and management of coastal systems and resources (Coastal Zone Management Unit, 2020a). The 1999 Integrated Coastal Management Plan for the West and South Coasts of Barbados highlighted the need to take into account global warming and its influence on sea level rise and increased storminess. It also advised that there was a need to distinguish between natural and human induced changes to ensure that policies were well-targeted to address their impacts (Coastal Zone Management Unit, 1999). The Integrated Coastal Zone

Management Plan also laid the groundwork for various CZMU initiatives like the Coastal Infrastructure Program (2002-2009) and the Coastal Risk Assessment and Management Program (2011-present). The most recently updated draft CZMU plan (2020b) noted that adaptive capacity for climate change adaptation remained weak (Coastal Zone Management Unit, 2020b) and called for strengthening this capacity through a coordinated governance arrangement.

The TCDPO and the CZMU, in an effort to support human adaptation to coastal hazards, has produced hazard and risk assessments and maps related to, among other factors, long-term SLR, storm surges, flooding from marine and terrestrial events, including cliff instability, and tsunami impacts. Additionally, they facilitate human adaptation by ensuring that coastal management and development control decisions explicitly involve consideration of policies and management guidance under the "ridge-to-reef" concept, and specifically, the principles and practice of Integrated Watershed Management Planning and the Natural Heritage System identified in the Integrated Coastal Zone Management Plan. As part of the human adaptation approach to coastal hazard risk reduction, communities are engaged in managing one of the last remaining coastal wetlands at Holetown Lagoon. All of these measures involve a high level of stakeholder input, which is consistent with the inclusiveness espoused in the United Nations Sustainable Development Goal 11 (Make cities and human settlements inclusive, safe, resilient and sustainable).

A key government policy is (re)locating inland from the coast—this has been a form of human adaptation to both coastal erosion and flooding, which has been in practice over several decades. Barbados has a national statute, which predates climate change discussions, that established a minimum building setback for all new buildings along sandy coasts of 30 m from the mean high-water mark. Along cliffs, the setback is 10 m from the under portion of the cliff. For Barbados, one objective is to ensure that built developments are located away from the zone of risk where SLR, storm surges and flooding occur (Mycoo, 2006). Cognizant of the importance of knowledge awareness among individuals and communities in adapting to climate change, the TCDPO and the CZMU more recently have indicated that applications for major developments or change of land use within 30 m of the coast will be subject to an Environmental and Social Impact Assessment and other supporting or technical studies, subject to the satisfaction of the Chief Town Planner or his/her designate (Town and Country Development Planning Office, 2017a). In considering such applications, the TCDPO will act on advice provided by the CZMU and the Ministry of Public Works. It may also impose conditions of approval such as maintenance requirements. Here, stakeholder input will be a key feature of policy- and decision-making.

The current TCDPO PDP (Town and Country Development Planning Office, 2017b, p. 57) provided detailed guidelines for individuals, communities and investors to safeguard their assets from coastal hazard impacts. All development applicants within Flood Susceptible Areas will prepare, to the satisfaction of the Ministry responsible for drainage, a hydrologic design study as part of the supporting documentation for development proposals. The purpose of this design study will be to assess the suitability of the development proposal to withstand projected flooding events on the site and to propose flood-proofing measures (Town and Country Development Planning Office, 2017b). Within Engineered Floodline Areas, new developments will not be permitted unless they can demonstrate that potential flooding can be contained using proposed flood proofing measures. Within Observed Flooded Areas, new developments will also not be permitted unless the stormwater management deficiencies within the area have been corrected to the satisfaction of the Ministry responsible for drainage, the Environmental Protection Department and Ministry of Health (Town and Country Development Planning Office, 2017a). In 100-year Floodline Areas, any new development or redevelopment areas will be designed with appropriate flood protection measures such as minimum freeboard elevation and prescribed limits to habitable space of building elements above flood levels (Town and Country Development Planning Office, 2017a). Development applications within the 100-years Floodline Area will be reviewed by the TCDPO based on the risk level and to determine whether an environmental and social impact assessment will be required. As part of the assessment, the applicant may be required to prepare and submit vulnerability assessments that explicitly identify the potential risks and mitigation measures acceptable to the Chief Town Planner. The environmental and social impact assessment process will take into consideration the impact of climate change and climate variability on the proposed development, and the development's influence on ecosystem processes and provisioning services (Town and Country Development Planning Office, 2017a).

Although there appears to be a sufficient amount of institutional interaction with respect to urban planning and some interaction with human adaptation, there remain some tensions and gaps between these institutions and their policies, most of which are highlighted in the TCDPO's Draft Green Paper on Planning Law Reform. First, it finds that there are issues surrounding the legal status of PDPs. Second, the Draft Green Paper calls for more clarity on the ways in which the Coastal Zone Management Act and the Town and Country Planning Act should interact and the role of the CZMU in decision-making on planning applications (Town and Country Development Planning Office, 2017a). Such tensions have particular significance to the coastal assets that are referenced in this paper because each asset falls within the coastal zone and, therefore, could be managed in accordance with both the Coastal Zone Management Act and the Town and Country Planning Act, potentially resulting in a mismanagement of development, and increased vulnerability because of overlapping jurisdictions. Third, the Draft Green Paper highlights a need for stronger provisions relating to the built heritage of Bridgetown, which is most likely a reference to Bridgetown's status as a UNESCO World Heritage Site (Town and Country Development Planning Office, 2017a). This holds particular relevance to the UNESCO World Heritage Site, since inadequate regulation of development in or around this asset could significantly increase its vulnerability to climate change.

TABLE 1 | A Summary of Bridgetown-specific initiatives.

Adaptation Initiative	Climate risk addressed	Stakeholder	Adaptation Typology	Coastal Asset
Constitution River Project Phase III- Flood Mitigation Works (2015) (Bahamas Trade Info, 2017; Nation News, 2015)	Flooding	Caribbean Development Bank (CDB), Barbados Tourism Investment, Inc. (BTI)	Implementation/Management	n/a
Coastal engineering infrastructure, including revetments and sea walls (1995, 2014) (Coastal Zone Management Unit, 1998; Government of Barbados, 2011; Flour Mill, St. Michael, Barbados, n.d; Thompson, 2013)	Coastal erosion and inundation, sea-level rise, protection from extreme storm surges	Coastal Zone Management Unit (CZMU), Infra, Inc., Inter-American Development Bank (IDB)	Implementation/Management	Bridgetown Deepwater Harbour Historic Bridgetown and its Garrison
Historic Bridgetown and its Garrison: Action Plan for Risk Management (2011) (Government of Barbados, 2011)	Flooding, sea level rise, frequent and intense storms, high levels of rainfall	CZMU, Department of Emergency Management, Government of Barbados	Implementation/Management	Historic Bridgetown and its Garrison
Aquarius Watersports Summer Camp (2005-2006 and 2018) (ICRI, 2018; SGP The GEF Small Grants Programme, n.d)	Marine ecosystem loss and damage	Barbados Marine Trust, International Coral Reef Initiative, Small Grants Programme through the Global Environment Facility	Education and Knowledge Management	Carlisle Bay
Caribbean Youth Environment Network Barbados (CYEN) (1993-present); Barbados Today, 2019)	Marine ecosystem loss and damage	CYEN, Ocean Conservancy	Education and Knowledge Management	Carlisle Bay
Carlisle Bay Marine Park (1997-2003) (CZMU, n.d. (b); MPAtlas, n.d; UN ECLAC, 2011	Erosion, marine ecosystem damage from pollution	CZMU	Implementation/Management	Carlisle Bay

Formal Governance: Programmes and Projects to Reduce Coastal Hazards and Support Human Adaptation

Flooding due to storm surges has had a large influence on residential, commercial and tourism assets, with estimated damages in the range of approximately US$1.5 billion for the 100-years condition (Coastal Zone Management Unit, 2020a). Some of the greatest damage has been in the Bridgetown area, yet most efforts to address coastal vulnerability to climate change in Barbados occur outside of Bridgetown. For instance, in the late 1990s to early 2000s, Barbados built several structures, such as boardwalks or groynes, to reduce coastal erosion. However, these structures are primarily located north or southeast of Bridgetown in Holetown and Rockley Beach, respectively (Mycoo, 2014; Coastal Zone Management Unit, 2020a). Furthermore, the implications of national vulnerability initiatives for climate risk reduction in Bridgetown are unclear. As an example, the Coastal Conservation Feasibility and Pre-Investment Study (1991) and Coastal Risk Assessment and Management Program (2011-present), funded by the Inter-American Development Bank, evaluated and addressed coastal climate hazards to Barbados' south and west coast (Mycoo and Donovan, 2017). While Bridgetown is located on the southwest coast, it is unclear whether these initiatives identified climate vulnerabilities in or specific risk reduction actions for the city. Therefore, national efforts to address coastal climate risks lack specificity to coastal vulnerability in Bridgetown and its adjoining urban corridor.

Over the years, however, there have been programmes and projects aimed at reducing coastal hazards and providing support for human adaptation in Greater Bridgetown. In 2015, the Caribbean Development Bank provided a US$7 million loan to the Government to upgrade the Constitution River, the primary channel that drains Bridgetown. The project's objective was to reduce flooding in Bridgetown through drainage channel dredging and rock armouring (Caribbean Development Bank, 2015). The Government is currently executing the Water Resource Management and Flood Resilience Climate Change Program, funded with assistance from the United States Agency for International Development (Government of Barbados, 2018). Additionally, there are a few Bridgetown-specific vulnerability initiatives which address climate risk to the coastal assets we reference in this paper (See **Table 1**). These initiatives can be classified per Robinson's (2017, p. 681) adaptation typologies for SIDS, which were developed to categorize similar climate adaptations and assess adaptation trends across SIDS. The five typologies are: 1) observation and

assessments, 2) planning, institutions, and policies, 3) implementation and management, 4) monitoring and evaluation, and 5) education and knowledge management.

In Bridgetown proper and as indicated in **Table 1**, vulnerability initiatives (a) are mostly categorized under the "implementation and management" typology and (b) address flooding and marine ecosystem loss. Flooding and coastal inundation present the most direct climate risk to the city and its coastal assets, and as a result the Constitution River Project (2016) and coastal engineering infrastructure are important vulnerability reduction efforts (Government of Barbados, 2018). The Constitution River Project aims to reduce urban flood risk by creating better drainage systems. However, given the project is approximately 1 km inland, it is unclear how the upgrades address vulnerability to these coastal assets. Additionally, using funding from the Inter-American Development Bank and private donors, specifically from the Barbadian construction company Infra Inc., Bridgetown has built seawalls at the Garrison and revetments at the Harbor to reduce physical threats of coastal inundation and storm surges (Government of Barbados, 2011; Thompson, 2013).

While vulnerability measures classified as "implementation and management" actions are hard infrastructure projects aimed at reducing flood and coastal inundation risk, initiatives classified under "education and management" address social vulnerabilities to climate change. The Aquarius Watersports Camp and the Caribbean Youth Environment Network Barbados (CYEN Barbados) organize outdoor recreation experiences or beach clean-ups at Carlisle Bay, respectively, to increase youth capacity to respond to marine ecosystem degradation (Aquarius Watersports Barbados, n.d.; Hinkson, 2019; Caribbean Youth Environment Network in Barbados, n.d.; SGP The GEF Small Grants Program, n.d.). Overall, Bridgetown's limited number of city-specific initiatives address some physical and social vulnerability to coastal assets.

Although Bridgetown has had multiple PDPs with implications for climate vulnerability reduction, few plans have been implemented. For instance, Barbados participates in the Inter-American Development Bank's Emerging and Sustainable Cities Program, which supports Latin American and Caribbean cities in developing specific action plans to increase resilience (Inter-American Development Bank, n.d). Yet, it has not developed a Sustainable Cities Plan, the barriers to implementation are unclear, and the lack of follow-through on the Emerging and Sustainable Cities Program and other development plans is likely limiting the number and effectiveness of Bridgetown-specific climate initiatives. With these restrictions, the role of these initiatives in reducing coastal vulnerability is ambiguous. On the one hand, the Aquarius Watersports Camp inspired participants to think critically about or pursue marine environment conservation (SGP The GEF Small Grants Program, n.d.). This suggests that, along with processes to draft the Planning and Development Act and develop heritage-based tourism, climate resilience efforts could also be increasing community engagement in Bridgetown–a significant shift given the city's historic lack of public participation. On the other hand, existing Bridgetown-specific initiatives fail to address climate risks at the Careenage. Additionally, only half the initiatives address flooding or coastal inundation, the largest threats to key assets. Therefore, these gaps suggest that vulnerability reduction efforts in Bridgetown are disconnected from the city's major climate risks.

Informal Governance: Adapting Coastal Assets for Local Needs and Uses

Research by Jaja et al. (2017) shows that, given that potential climate impacts are experienced more locally, it is important to focus community-based or social adaptation responses to identify actual climate impacts. In Barbados' urban corridor community efforts, social adaptation responses point to the climate change impacts that the population is most affected by such as flooding, erosion and storms. Climate change and associated coastal hazards impacting Greater Bridgetown have led to human adaptation in several ways where locals are adapting coastal assets for their needs and uses. Losses to coastal ecosystem services, infrastructure damage and threats to livelihoods due to climate change have promoted human responses to improve economic resilience. The island's tourism product focused in the past on beach tourism and catered to mainly tourists from the United Kingdom, and to a lesser extent, the United States (Lorde et al., 2011). Nature-based tourism, especially exploiting its coastal assets, including the beaches and coral reefs, has remained vital to economic survival, but the population has diversified into cultural and heritage tourism as a means of adapting to the impacts of climate change and to remain competitive in an ever-changing international tourism market (Richardson-Ngwenya and Momsen, 2017). With SLR and beach erosion occurring on the southwest coast, the designation of Bridgetown as a UNESCO World Heritage Site is strategic in reducing its dependence on beach tourism while simultaneously ensuring the preservation of historic buildings.

Another aspect of resident-led human adaptation in the Barbados context is the use of cultural traditions such as fish fry events to develop alternative livelihoods (Leslie, 2010). Small fish fry vendors, who tend to be mainly women from the community of Oistins, have self-organized and set-up stalls on Friday nights further inland from the coast where tourists can enjoy the local cuisine and delicacies, purchase arts and craft and participate in Barbadian and Caribbean entertainment (Leslie, 2010). This location and product diversification help minimize the vulnerability of small business operators to the vicissitudes of climate change such as SLR, storm surge and flooding. The women use their social capital formed through links with tour operators and hotels to promote their small business operations, especially the fish fry stalls (Richardson-Ngwenya and Momsen, 2017).

Human adaptation is also demonstrated in the actions taken by Oistins' fishers who are faced with high socio-economic vulnerability (Leslie, 2010). Many of their boats are usually uninsured against hurricanes and storms and they generally lack savings to absorb the cost of boat repair or replacement (Leslie, 2010). In response to livelihood threats from such events, fishermen have joined up with the women fish fry vendors, restaurants and rum shops to get catch sold so as to generate



FIGURE 5 | A beach bar along Barbados' southwest coast.

income, but also to raise savings to provide relief during times of hardship as is often the case in the aftermath of such extreme events (McConney et al., 2012; Monnereau and Oxenford, 2017). This pattern of adaptation is consistent with the rest of the Caribbean where most small-scale fishers, especially the reef-associated shallow shelf fishers have one or more additional or alternate seasonal sources of income within the fisheries sector, or from other sectors, especially tourism and construction (see Gill et al., 2007; Mumby et al., 2014; Gill et al., 2019). For fishers, forming partnerships with the women fish fry vendors is a social safety net that provides access to income and livelihood opportunities when other sectors fail or are disrupted by extreme weather events (McConney et al., 2012).

Beach bars and restaurants situated along Barbados' southwest coast, which provide additional evidence of informal coastal asset adaptation, are impermanent structures that are built directly on the beachfront and are easily relocated if flooding from SLR becomes more severe (See **Figure 5**). Operators of these small businesses have adapted the structures along the lines of chattel houses (i.e. small moveable wooden houses set on blocks or a groundsill rather than being anchored into the ground) for which Barbados is well-known (Richardson-Ngwenya and Momsen, 2017). This allows the structures to be disassembled (along with the blocks) and moved from place to place. Although the beach bars and restaurants are permitted at the beachfront to promote livelihoods associated with coastal tourism, their flexible structure inadvertently enables small business operators to adapt to coastal flooding and erosion by moving to higher ground.

Framework Component 4: Integrating Expert and Local Knowledge: Transcending the Central Government and its Technocrats

As Barbados' government is highly centralized, most human adaptation to coastal and other hazards has been coordinated by the central government, particularly through the TCDPO and the CZMU, within which the role of individuals and communities in adopting various adaptation options is seen as integral. Two examples will be recounted here. First, the 2017 PDP, released by the TCDPO, recommends several measures to support human adaptation to SLR, storm surges and flooding in planning decisions, which departs from the hard engineering measures usually employed to minimize such impacts. These risk-informed land use planning measures include the adoption of tree preservation and replacement plans for all development in the Integrated Coastal Zone Management areas. Second, as mentioned earlier, the TCDPO and the CZMU have indicated that applications for major developments or change of land use within 30 m of the coast will be subject to an Environmental and Social Impact Assessment and other supporting or technical studies subject to the satisfaction of the Chief Town Planner or designate. These two examples underscore the centrality of the government and its technocrats in human adaptation to coastal hazards; they also signal a recognition of stakeholder input being a key feature of policy- and decision-making.

Much emphasis has been placed on top-down or planned human adaptation, which also has the tendency to undermine the capacity for organized responses that are catalytic in transforming societies from within. However, there is scope to transcend the central government and its technocrats, and increasingly integrate local communities and their knowledge into human adaptation. In fact, individuals, communities and private entrepreneurs are progressively more engaged in finding their own homegrown solutions in adapting to climate change impacts such as flooding. This is illustrated by the fish fry events and the temporary construction of beach bars and restaurants described above. Additionally, although Bridgetown has historically lacked socio-political engagement (Pelling, 2003; Pugh, 2006; Pugh, 2013), the tide may be turning. During the drafting of the 2019 Planning and Development Act, the Government placed an emphasis on public participation, and hosted a stakeholder

discussion in July 2018 for professionals involved in the planning process (Joy, 2018). While the discussion was live-broadcasted and it was requested that any public input be emailed or mailed, it is unclear whether there were forums or meetings where the public could discuss the Bill and be informed of it in person. It is clear that the Barbados Government is making attempts at increasing participation, but the absence of prominent city-level institutions could be hampering greater adaptation action (see Robinson, 2020b), as local institutions can be better informed by the public, and therefore minimize the risk of misaligned policy.

DISCUSSION

In this section, we discuss the above results in view of the paper's three research questions.

Research Question 1: In What Ways is Greater Bridgetown Vulnerable to Coastal Hazards?

We found that flooding in Barbados as a whole, and in Bridgetown specifically, is attributable to anthropogenic pressures such as built development arising from urbanization as well as rising sea-levels and storm surges resulting from climate change. A long history of colonial settlement and sugar cane cultivation resulted in substantial forest depletion leaving the island with approximately 84 km^2 (19.5%) of forested area. Bridgetown's early coastal location and urban morphology resulting from a concentration of population at the city center, and its major role as a port in the core-periphery relationship with England through which sugarcane exports were channelled, drew investments in infrastructure and buildings along the coast. This pattern was further entrenched in the postcolonial era when government investments in offices, transportation upgrade and expansion, tourism and heritage and cultural buildings increased in the capital city and later on, Greater Bridgetown. As noted earlier, in the post-colonial era, many mangrove forests have been cleared to accommodate development along the south and west coasts and the only significant remaining mangroves are the Graeme Hall Swamp, which stands on approximately 20 ha. Forests and mangrove denudation significantly contribute to the population's increasing vulnerability to coastal hazards as forests and mangroves provide ecosystem provisioning services such as flood mitigation. The population settled along coastal parts of Greater Bridgetown are vulnerable to flooding associated with heavy rainfall in the wet season, rising sea level and storm surges.

Studies conducted in 2015 showed that there were shifts in migration from Bridgetown to an urban corridor made up of suburban centers. This changing internal migration pattern may reduce the vulnerability of the population to coastal hazards. These studies found that despite some economic growth, Bridgetown is experiencing declining population density, and increasing poverty. In addition to high rates of vacant buildings in Bridgetown many residents were relocating to emerging suburban areas north or south of the city, like Holetown and Warrens (Downes et al., 2015; Seijas, 2015). Statistical evidence confirmed that from 2004 to 2016, population density fell from 330 persons to 260 persons per km^2. Additionally, in 2010, the population of Bridgetown was comparatively poorer than that of rural Barbados (Downes et al., 2015). These characteristics suggest that Barbadians are either abandoning Bridgetown for more desirable opportunities or quality of life in surrounding areas, or, as Downes et al. (2015) suggests, gentrification from coastal development is pushing some Barbadians out of the urban center. This is, in some respects, relieving human pressure on the coastal plain—it will also likely reduce human impacts should there be a major flooding event.

Hydrological studies confirm that flooding results from an interplay of time, location and space of climate change, climate variability, soil characteristics, vegetative cover, topography and land elevation. In SIDS, urbanization and development have given rise to new causes of flooding that magnify adverse societal effects. Traditionally, across the globe, engineering has been seen as a panacea for flood mitigation. Flood management has, until recently, emphasized investment and trust in constructed solutions that rely on structural robustness. As Cashman et al. (2012) p. 2 note, however:

> "This attitude has been changing, brought about by a number of factors including the apparent failure of hard engineering to prevent or at least contain flooding events. At the same time there has been a shift in public attitudes towards flood risks; no longer are they seen as acts of providence for which the government has only a minor responsibility. Increasingly, flooding is seen as the responsibility of the government to do something about. More and more communities that are at risk are demanding that they be protected. Meeting such expectations and demands while in theory would be technically feasible is in practice impossible given the financial resources that would be required. As a result, other approaches are being actively explored that accept and live with floods. . ..and seek to place an emphasis on building resilience amongst stakeholders as a coping strategy."

In Caribbean SIDS, including Barbados, while much emphasis has been placed on engineering solutions to climate change, there are examples of ecosystem based measures solutions that are being used by individuals, households and communities in response to climate change challenges. Nevertheless, extensive social networks, personal economic investments and political obstacles complicate effective human adaptation.

Research Question 2: What are the Human Dimensions of This Vulnerability?

Specifically, we found that the four coastal assets referenced in this paper—Bridgetown Deepwater Harbor, Careenage, Carlisle Bay, and the UNESCO World Heritage Site—are physically, economically, and socially vulnerable to various coastal

hazards, including SLR, storm surges and flooding. Physically, these assets are located within the 100-year flood area; therefore, coastal inundation could lead to significant loss and/or damage (Town and Country Development Planning Office, 2017a). Economic vulnerability is illustrated by climate threats to the Bridgetown Deepwater Harbor. Wholesale and retail trade and tourism account for 34% of Barbados' gross domestic product (Government of Barbados, 2018). Given that the Deepwater Harbor facilitates this robust trade and tourism economy, inundation or damage to the Harbor would hinder its ability to host cargo and cruise ships, thereby straining these vital sectors and Barbados' economy (Government of Barbados, 2018). Despite the extent of this climate risk, there is a mismatch with initiatives along with evidence to suggest that climate threats have not been a primary concern for Bridgetown-specific vulnerability reduction programmes. For example, the UNESCO World Heritage Site Action Plan for Risk Management intends to address climate-related flooding and storm surges through coordinated disaster responses (Government of Barbados, 2011). This suggests that disaster risk management is prioritized over reducing coastal climate hazards and risks, potentially weakening coastal climate responses in Bridgetown. However, the fact that climate is one of many considerations also suggests a holistic approach to climate vulnerability reduction in Bridgetown. Medina et al. (2019) note that future climate vulnerability strategies in Barbados should combine disaster risk management with long-term initiatives to strengthen coastal responses to climate change, further highlighting the strength of an integrated approach. However, given that 1) the Careenage remains uncovered by any initiatives specific to Bridgetown 2) major climate risks to the key assets (e.g., flooding and coastal inundation), are rarely first concerns of Bridgetown-specific initiatives, and 3) few climate resilience plans are implemented, serious challenges to reducing vulnerability remain. In summary, despite Bridgetown's efforts to reduce physical and social vulnerabilities to its coastal assets and surrounding areas, the failure by the government and stakeholders to address and prioritize the most significant climate threats and implement a wide variety of climate risk reduction or development programmes, has ultimately limited the city's ability to reduce coastal vulnerability to climate change and build coastal resilience. These institutional and social barriers highlight the human dimensions of vulnerability to climate change as people's lives, livelihoods and assets remain exposed to risks and are impacted by cascading climate change events such as flooding and storm surges.

Research Question 3: What are the Associated Human Adaptations?

We found that institutions in Bridgetown have traditionally been deployed to understand risks to people stemming from coastal hazards, especially flooding, and have been mandated to manage coastal development. Yet, a key finding is that the city's local institutions are weak and there is a divergence between the planning and implementation of risk-focused adaptations. Further, less emphasis has been placed on the adaptation to long-term risks for coastal assets and areas, and as a result, these assets and the people living on the coasts are quite vulnerable. The TCDPO and the CZMU represent two significant institutions that operate to manage risks regarding elements of the coastal assets discussed. In order for Bridgetown to transform alongside the pernicious risks of climate change, an institutional prioritization of adaptation and resilience building in both key coastal assets, and the institutions themselves is essential. Addressing coastal asset vulnerability will likely require improving or increasing levels of public participation. Pelling (2003) notes that poor public participation could result in misunderstanding or poor mismanagement of climate risks within coastal communities, thereby suggesting that Greater Bridgetown's characteristic lack of community engagement will likely create and/or increase social vulnerabilities. However, the current community engagement efforts through heritage preservation or heritage-based tourism development will likely help to alleviate climate vulnerability, especially to the key coastal assets. The city's focus on redeveloping historic sites will also likely increase the role of public participation in Bridgetown. For instance, in the UNESCO World Heritage Site's Management Plan, the "wider public" is listed as a stakeholder and several institutions, including the Barbados National Gallery and Barbados Museum and Historical Society, are tasked with gaining community "buy-in" for heritage preservation (Barbados World Heritage Committee, 2011, p. 47). Given the traditionally low socio-political involvement of Bridgetown's residents, helping to protect and enhance heritage sites could decrease previous ambivalence toward public engagement (Pelling, 2003; Inniss, 2012). Current community-based responses suggest human adaptation is prioritized according to the most critical climate hazard issues that impact on livelihoods. This is clearly illustrated in the building of mobile beach bars and the location of fish fry operations further inland from the coast, thereby protecting community investments, assets and livelihoods from flooding, erosion and storms.

Considering governmental and community-based responses, continuing to explore the role of public participation and human adaptations in the context of climate change in Greater Bridgetown will be important. The paper's finding that capacity for coastal/urban resilience cannot be maximized without institutional prioritization of vulnerability, increased stakeholder "buy-in" and participation, along with substantial investment in adaptation and the protection of valuable coastal infrastructure, also has relevance for SIDS besides Barbados as they undertake human adaptations to coastal hazards as part of a wider strategy to build coastal urban resilience.

CONCLUSION

This paper set out to understand Greater Bridgetown's vulnerability to coastal hazards (SLR, storm surges and flooding) and the associated human system adaptations. It raised three key research questions to achieve its objectives: 1) In what ways is Greater Bridgetown vulnerable to coastal

hazards? 2) What are the human dimensions of this vulnerability? and 3) What are the associated human adaptations?

We found that flooding in Barbados as a whole, and in Bridgetown specifically, is attributable to anthropogenic pressures such as built development arising from urbanization as well as rising sea-levels and storm surges resulting from climate change. A long history of colonial settlement and monocrop cultivation, namely that of sugarcane, resulted in substantial forest depletion. Bridgetown's early coastal location, urban morphology influenced by a concentration of population at the city center, and its major role as a port in the core-periphery relationship with England through which sugarcane exports were channelled, drew investments in infrastructure and buildings along the coast. The four coastal assets referenced in this paper–Bridgetown Deepwater Harbor, Careenage, Carlisle Bay, and the UNESCO World Heritage Site–are located within the 100-year flood area and are, therefore, physically, economically, and socially vulnerable to various coastal hazards, including SLR, storm surges and flooding. Coastal inundation could lead to significant loss and/or damage in the near future. We also found that institutions in Bridgetown have traditionally been deployed to understand risks to people stemming from coastal hazards, especially flooding, and have been mandated to manage coastal development. Yet, a key finding is that the city's local institutions are weak and there is a divergence between the planning and implementation of risk-focused adaptations.

In view of our findings, we are able to derive four key empirical insights: 1) vulnerability to coastal hazards in an urban landscape is linked to the city's historical development (temporal scale), and to its urban morphology (spatial scale), 2) that this vulnerability is further linked to its governance, particularly the institutions, laws, policies and plans that are in force, 3) that this vulnerability is significantly reduced where there are synergies between formal and informal governance, and 4) socio-political engagement is an essential component of human system adaptation in an urban landscape. Using the case of Greater Bridgetown, this paper helps demonstrate that it might not be likely for a city's capacity for coastal/urban resilience to be maximized without institutional prioritization of vulnerability, increased stakeholder "buy-in" and participation, along with significant investment in adaptation and the protection of valuable coastal infrastructure. Governance challenges in the urban space, though dynamic, can be addressed through integrating approaches to planning across temporal and spatial scales, increasing transparency, public participation and the application of conflict resolution practices, as well as robust decision-making that reflects the key tenets of good urban governance.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/Supplementary Material, further inquiries can be directed to the corresponding author.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Annex 534

J. H. Knox, *Human Rights,* in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW, eds. L. Rajamani and J. Peel (Oxford University Press, 2021)

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CHAPTER

45 Human Rights

John H. Knox

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Abstract

This chapter examines the relationship between human rights and the environment, which has developed through the adoption and interpretation of many different national constitutions and laws, human rights treaties, and multilateral environmental agreements (MEAs). The development of what might be called 'environmental human rights law' has occurred in three main channels. First, efforts to achieve recognition of a human right to a healthy environment, while ineffective at the UN, have achieved widespread success at the national and regional levels. Second, some multilateral environmental instruments have incorporated human rights norms, especially rights of access to information, public participation, and remedy. Third, human rights tribunals and other monitoring bodies have 'greened' human rights law by applying a wide range of human rights to environmental harm. The chapter explains each of these paths of development before sketching potential lines of further development through recognition of the rights of nature and of future generations.

Keywords: international environmental law, human rights, right to life, right to health, access to information, access to justice

Subject: Environment and Energy Law, International Law, Law

Series: Oxford Handbooks

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I. Introduction

Linkages between environmental protection and human rights depend on two premises: (a) the full enjoyment of many human rights, including the rights to life, health, and an adequate standard of living, depends on an environment that is healthy for human beings; and (b) the exercise of human rights, including the rights to information, participation in governance, and access to justice, helps to ensure that individuals and communities can advocate for and achieve satisfactory levels of environmental protection.

In principle, this interdependent relationship between human rights and the environment could be recognized through inclusion of a right to a healthy environment in a global declaration or treaty. However,

the 1948 Universal Declaration of Human Rights and the two International Covenants on human rights[1] preceded the modern environmental movement, and later efforts to persuade the United Nations (UN) to recognize the right have not been successful. Although Principle 1 of the 1972 Stockholm Declaration comes close to stating the right explicitly, the UN has declined to extend or even repeat its language.

The absence of a globally recognized human right to a healthy environment has not prevented the evolution of rights-based approaches to environmental protection, but it has meant that the evolution has occurred without the benefit of an overarching international legal framework or agreed normative touchstone. Instead, the relationship of human rights and the environment has developed through the adoption and
p. 785 interpretation of many different national constitutions and laws, human rights treaties, and ↳ multilateral environmental agreements. Remarkably, this disparate set of sources has produced a relatively consistent set of norms.

The development of what might be called 'environmental human rights law' has occurred in three main channels. First, efforts to achieve recognition of a human right to a healthy environment, while ineffective at the UN, have achieved widespread success at the national and regional levels. Second, some multilateral environmental instruments have incorporated human rights norms, especially rights of access to information, public participation, and remedy. Third, human rights tribunals and other monitoring bodies have 'greened' human rights law by applying a wide range of human rights to environmental harm.

The following sections explain each of these paths of development. A concluding section describes recent signs that the approaches are converging, and sketches potential lines of further development through recognition of the rights of nature and of future generations.[2]

II. Recognition of the Human Right to a Healthy Environment

That environmental degradation interferes with the full enjoyment of human rights is not a new insight. In 1968, when the UN General Assembly decided to convene the first international environmental conference, it expressed concern about the effects of 'the continuing and accelerating impairment of the quality of the human environment ... on the condition of man, his physical, mental and social well-being, his dignity and his enjoyment of basic human rights'.[3] Four years later, the nations participating in the conference stated, in the Stockholm Declaration, that the natural as well as the human-made environment is essential to human well-being 'and to the enjoyment of basic human rights—even the right to life itself'.[4]

The recognition that a healthy environment is necessary to human well-being leads naturally to the idea that humans have a human right to a healthy environment, as they have human rights to other interests of fundamental importance to human dignity, freedom, and equality. So it is unsurprising that the first principle of the Stockholm Declaration refers to the 'right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being'.[5]

p. 786 What may be more surprising is that the UN has never elaborated, or even repeated, this recognition, despite several opportunities to do so. The 1987 report of the World Commission on Environment and Development (the Brundtland Commission), which urged the international community to adopt sustainable development as a goal, presented legal principles drafted by an experts group, the first of which declared that 'all human beings have the fundamental right to an environment adequate for their health and well-being'.[6] However, the 1992 UN Conference on Environment and Development did not include this language in the Rio Declaration.[7] Neither did later conferences on sustainable development in Johannesburg in 2002 and Rio de Janeiro in 2012. Similarly, in 1994 an independent expert on the Sub-Commission on Prevention of Discrimination and Protection of Minorities, a subsidiary body to the UN Human Rights Commission,

presented draft principles on human rights and the environment that included 'the right to a secure, healthy and ecologically sound environment', but the Commission did not adopt the draft declaration.[8]

In contrast, the right has been widely recognized at the regional and national levels. In 1981, the African Charter on Human and Peoples' Rights became the first human rights treaty to include an environmental right, stating that 'all peoples' have the right to 'a general satisfactory environment favourable to their development'.[9] The 1988 San Salvador Protocol to the 1969 American Convention on Human Rights includes the right of everyone 'to live in a healthy environment' in its list of economic, social, and cultural rights.[10] The Aarhus Convention, concluded ten years later under the auspices of the UN Economic Commission for Europe, states in its first article that parties shall guarantee rights of information, participation, and remedy in environmental matters '[i]n order to contribute to the protection of the right of every person of present and future generations to live in an environment adequate to his or her health and well-being'.[11]

Recognition of the right has progressed even more rapidly and extensively at the national level. Beginning
p. 787 in the 1970s and continuing steadily to the present, at least 100 ↳ states have adopted explicit constitutional rights to a healthy environment.[12] Other countries have included the right in national legislation. In all, more than 150 countries have recognized the right in their constitutions or other national legislation, through judicial interpretation of other constitutional rights, or through ratification of regional agreements. Although some states have done little or nothing to implement it, courts in many countries apply the right as a basis for, among other things, reviewing government actions with environmental effects, protecting rights of information and participation, imposing substantive standards, and ordering legal remedies for environmental harm.[13]

III. Incorporation of Human Rights Norms in Multilateral Environmental Agreements

Multilateral environmental agreements almost never refer to human rights explicitly. The principal exception is the Paris Agreement of 2015, whose preamble states that 'Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of Indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity'. Although the preambular language does not have operational effect, it may help to spur governments to pay greater attention to human rights in their responses to climate change.[14]

More often, environmental instruments include language that implicitly reflects and supports human rights norms, especially rights of access to information, public participation, and effective remedies.[15] The most important global instrument in this respect is the 1992 Rio Declaration, Principle 10 of which states:

> Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning
> p. 788 the environment that is held by public authorities, ↳ including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Two regional agreements codify the Principle 10 access rights and define the obligations of states in more detail. The Aarhus Convention, which has forty-seven parties in Europe and central Asia, sets out detailed

requirements that its parties: provide environmental information (defined broadly) on request; update and disseminate environmental information; provide for public participation in environmental decision-making; and ensure that members of the public have access to legal remedies for failures to provide environmental information and facilitate public participation.[16] Its compliance committee, composed of independent experts, receives communications from members of the public, issues findings, and makes recommendations.[17]

In 2018, Latin American and Caribbean countries adopted the Escazú Agreement, which also includes detailed provisions requiring that its parties: ensure the public's right of access to environmental information; collect and disseminate environmental information; provide for public participation in environmental decision-making, and ensure access to remedies in relation not only to information and public participation, but also to 'any other decision, action or omission that affects or could affect the environment adversely or violate laws and regulations related to the environment'.[18]

The Escazú Agreement also requires each party to guarantee a 'safe and enabling environment for persons, groups and organizations that promote and defend human rights in environmental matters'.[19] The Conference of the Parties, at its first meeting, will determine the rules of a committee to support implementation and compliance.[20]

Although there is no global equivalent to the regional agreements implementing Principle 10, many multilateral environmental agreements encourage or require their parties to provide access to information and/or promote public participation on specified topics within the scope of the agreements.[21] In addition, in
p. 789 2010, the UN ↳ Environment Programme (UNEP) Governing Council adopted guidelines for national legislation implementing access to information, public participation, and access to justice in environmental matters.[22]

The 1992 Convention on Biological Diversity (CBD) provides linkages to a different set of human rights norms, concerning the Indigenous and tribal rights described in the following section.[23] The CBD encourages its parties to respect, preserve, and maintain Indigenous and traditional knowledge, innovations, and practices relevant for the conservation and sustainable use of biological diversity, to promote their wider application with the approval and involvement of the holders, and to encourage the equitable sharing of the benefits arising from their utilization.[24] It also urges the parties to protect and encourage the customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements.[25] In 2010, the parties to the CBD adopted the Nagoya Protocol, which provides for 'the prior informed consent or approval and involvement of indigenous and local communities' in relation to access to traditional knowledge associated with genetic resources, and requires that its parties take steps to ensure that the benefits arising from utilization of genetic resources and traditional knowledge are shared in a fair and equitable way with the communities concerned.[26]

IV. Application of Human Rights Law to Environmental Issues

Much of the development of environmental human rights law has occurred through the application by human rights bodies of existing rights, such as rights to life and health, to environmental issues. Although the development has occurred in many different forums, construing different human rights sources, it has resulted in a coherent set of norms. In addition, international instruments set out Indigenous and tribal rights, many of which directly relate to the environment.

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A. Indigenous and Tribal Rights Relating To the Environment

The two most important sources of Indigenous and tribal rights relating to the environment are International Labour Organisation Convention (No 169) concerning Indigenous and Tribal Peoples in Independent Countries, and the UN Declaration on the Rights of Indigenous Peoples (UNDRIP).[27] The ILO Convention has twenty-three parties, most of which are in Latin America. While not legally binding in itself, UNDRIP has been generally accepted by states as setting benchmark standards in relation to Indigenous rights,[28] and has influenced human rights bodies in their application of other treaties to Indigenous and tribal peoples.[29]

Both ILO Convention No 169 and UNDRIP provide that states must recognize and protect the rights of Indigenous peoples to the lands, territories, and resources that they have traditionally owned, occupied, or used, including those to which they have had access for their subsistence and traditional activities.[30] The ILO Convention provides that states have obligations to consult with Indigenous and tribal peoples when considering measures that may affect them directly, before undertaking or permitting any programmes for the exploration or exploitation of resources pertaining to their lands or territories, and when considering their capacity to alienate their lands or territories or otherwise transfer their rights outside their own community.[31] UNDRIP takes an important further step, stating that the free, prior, and informed consent of Indigenous peoples is necessary before the adoption or implementation of any laws, policies, or measures that may affect them, and in particular before the approval of any project affecting their lands, territories, or resources, including the extraction or exploitation of mineral, water, or other resources, or the storage or disposal of hazardous materials.[32]

UNDRIP also states that Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands, territories, and resources, and to receive assistance
p. 791 from states for such conservation and protection.[33] ↳ ILO Convention No 169 requires states to safeguard the rights of the peoples concerned to the natural resources pertaining to their lands, including their right to participate in the use, management, and conservation of these resources.[34]

The ILO Convention provides that states must ensure that the peoples concerned shall, wherever possible, participate in the benefits of exploration or exploitation of mineral or sub-surface resources pertaining to their lands and shall receive fair compensation for any damages which they may sustain as a result of such activities.[35] More generally, UNDRIP indicates that states must provide for just and fair redress for harm resulting from any activities affecting their lands, territories, or resources, particularly in connection with the development, utilization, or exploitation of mineral, water, or other resources, and 'appropriate measures shall be taken to mitigate adverse environmental, economic, social, cultural or spiritual impact'.[36] They have the right to restitution or, if this is not possible, compensation for their lands, territories, and resources that have been taken, used, or damaged without their consent.[37]

B. 'Greening' Human Rights

1. Regional human rights tribunals

Several regional instruments recognize the human right to a healthy (or satisfactory) environment, as noted above, but only the African Charter makes the right reviewable by a tribunal or other monitoring body.[38] Instead, regional bodies in Africa, the Americas, and Europe have applied other human rights, including the rights to life, health, private and family life, and property, to environmental issues. The regional human rights systems include courts with the authority to issue decisions that legally bind the state parties, as well as commissions and other expert bodies able to review complaints but not issue binding decisions.

a) African Commission and African Court on Human and Peoples' Rights

The most important environmental decision in the African system is *Social and Economic Rights Action Centre v Nigeria*, a case involving massive oil pollution in the Niger delta region by a consortium of the Nigerian government and Royal Dutch Shell.[39] The African Commission on Human and Peoples' Rights (AComHPR)
p. 792 found that the ↳ exploitation violated the human rights of the Ogoni people living in the delta, including their rights to health and to a satisfactory environment, which are protected by Articles 16 and 24 of the African Charter. The Commission stated that Nigeria had duties to take 'reasonable and other measures to prevent pollution and ecological degradation, to promote conservation, and to secure an ecologically sustainable development and use of natural resources', and that compliance with the 'spirit' of Articles 16 and 24 'must also include ordering or at least permitting independent scientific monitoring of threatened environments, requiring and publicizing environmental and social impact studies prior to any major industrial development, undertaking appropriate monitoring and providing information to those communities exposed to hazardous materials and activities and providing meaningful opportunities for individuals to be heard and to participate in the development decisions affecting their communities'.[40]

Other important environmental decisions from the African system include *Centre for Minority Rights Development et al v Kenya*[41] and *African Commission on Human and Peoples' Rights v Kenya*,[42] in which the commission and the court (ACtHPR), respectively, held that the actions of a government concerning protected areas must respect and protect the rights of Indigenous peoples living there.[43]

b) European Court of Human Rights

The European Court of Human Rights (ECtHR) has developed an extensive environmental jurisprudence since 1994.[44] The pathbreaking decision was *López Ostra v Spain*, in which the court held that severe environmental pollution could violate the right to respect for private and family life protected by Article 8 of the 1950 European Convention on Human Rights. The court stated that even when pollution does not seriously endanger the health of a claimant, it may give rise to a positive duty on the state to take reasonable and appropriate measures to secure her rights.[45]

In subsequent cases under Article 8, the court has distinguished between substantive and procedural obligations. With respect to the former, it has emphasized that states have wide discretion (or 'margin of appreciation') and has given near-dispositive weight to whether they followed their own domestic standards.[46] However, the court has adopted more specific procedural requirements, which require states to
p. 793 assess the effects of proposed activities that cause environmental harm and infringe human rights, ↳ to make environmental information public, and to allow the individuals concerned to have access to judicial remedies, especially if 'they consider that their interests or their comments have not been given sufficient weight in the decision-making process'.[47]

The court has also applied Article 2 of the European Convention, which protects the right to life, to environmental threats. The court has long held that Article 2 imposes positive as well as negative duties—that is, obligations on states to protect against threats to the right to life, not just to refrain from infringing the right directly. In the environmental context, the court has held that states must establish legislative and administrative frameworks that effectively deter threats to the right to life, including by regulating the licensing and supervision of hazardous and industrial activities and by providing the public information about such activities and natural disasters such as floods and mudslides.[48] If loss of life nevertheless results, states must conduct independent and impartial investigations and punish breaches as appropriate.[49]

The court may issue judgements for damages, but it may not invalidate laws. However, its decisions influence domestic courts that are able to apply the protections of the Convention more directly. A notable recent example is the 2019 decision of the Supreme Court of the Netherlands that Articles 2 and 8 impose a

duty on the Dutch government to protect against the serious risk of loss of life and disruption of family life threatened by climate change, and that the government violated this duty by not striving to reduce greenhouse gas emissions at least 25% from 1990 levels by the end of 2020.[50]

c) European Committee for Social Rights

The European Committee for Social Rights oversees the 1961 European Social Charter, which sets out economic, social, and cultural rights. The committee has interpreted the right to health in the Charter to include the right to a healthy environment.[51] Among other things, the committee has held that states must take specific measures to prevent air pollution, including by informing and educating the public about environmental problems, introducing threshold values for emissions, measuring air quality, monitoring health risks, and enforcing standards once adopted.[52] In setting standards, states should take into account the norms and guidelines set by national and international bodies.[53]

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d) Inter-American Commission and Court of Human Rights

Many of the important decisions in the Inter-American human rights system have involved Indigenous and tribal peoples. The Inter-American Court has stated that their right to property under the American Declaration and American Convention[54] includes the lands that they have traditionally occupied and the natural resources that they have traditionally used, because the lands and resources are necessary for their physical and cultural survival.[55] Drawing on ILO Convention No 169 and UNDRIP, the court has held that states have obligations to delimit and title the ownership of the lands traditionally occupied by Indigenous and tribal peoples, consult with them regarding any proposed concessions or other activities that may affect their lands and natural resources, ensure that no concession will be issued without a prior environmental and social impact assessment, and guarantee that they receive a 'reasonable benefit' from any such plan if approved.[56] Regarding large-scale development or investment projects that would have a major impact within the territory of Indigenous or tribal peoples, the state may only proceed if it obtains 'their free, prior, and informed consent, according to their customs and traditions'.[57]

More recently, in response to a request by Columbia seeking clarification of the application of the American Convention to environmental harm, the Inter-American Court issued a far-reaching Advisory Opinion on human rights and the environment.[58] Among other things, the opinion indicates that the responsibility of states under the American Convention extends to actions within their territory or control that cause transboundary environmental harm, and that the rights to information, public participation, and access to justice are integral to the rights of life and personal integrity in the environmental context.[59]

2. UN human rights bodies

UN treaty bodies have applied human rights to environmental issues in the course of their oversight of states' compliance with the major human rights treaties, including the 1966 International Covenant on
p. 795 Economic, Social and Cultural Rights (ICESCR) ↳ and the International Covenant on Civil and Political Rights (ICCPR).[60] Treaty bodies do not have the authority to issue binding decisions, but through their general comments, assessments of country reports, and decisions in response to individual communications, they have indicated that environmental harm interferes with the enjoyment of human rights and that states have obligations to protect against such harm.[61]

The Human Rights Council (HRC), the main UN intergovernmental human rights body, has also examined environmental issues, including through its Universal Periodic Review programme, in which it reviews the human rights records of every UN member state, and in a series of resolutions calling attention to the effects of climate change on human rights.[62] In addition, the Council has appointed independent experts,

often called special rapporteurs, with mandates to examine human rights in particular areas. Many of these experts, including the special rapporteurs on Indigenous peoples, human rights defenders, toxic substances, and the right to food, have issued reports applying human rights norms to specific environmental issues.[63]

In 2012, the Human Rights Council appointed an independent expert with a mandate to study the human rights obligations relating to the enjoyment of a safe, clean, healthy, and sustainable environment.[64] The present author received the mandate and prepared a series of reports mapping how human rights bodies have applied human rights norms to environmental issues.[65] In 2015, the Council renewed the mandate for another three years, changed the title of the mandate-holder to special rapporteur, and requested that he
p. 796 promote the realization of the obligations.[66] To that end, he prepared 'Framework ↳ Principles on Human Rights and the Environment' that summarize the human rights obligations relating to the environment.[67] In 2018, the Council took note with appreciation of the report presenting the Framework Principles and renewed the mandate for another three years.[68]

C. The Framework Principles on Human Rights and the Environment

The Framework Principles and their accompanying commentary do not purport to create new obligations under human rights law; rather, they reflect the application of existing obligations in the environmental context, as stated in international instruments and by the tribunals and other human rights bodies described above. The report presenting the Principles states that while not all governments have formally accepted all of these norms, their coherence is 'strong evidence of the converging trends towards greater uniformity and certainty in the understanding of human rights obligations relating to the environment'.[69]

The Framework Principles describe procedural obligations of states, including: to respect and protect the rights to freedom of expression, association, and peaceful assembly in relation to environmental matters; to provide for environmental education and public awareness; to provide public access to environmental information; to require the prior assessment of the possible environmental and human rights impacts of proposed projects and policies; to provide for and facilitate public participation in decision-making related to the environment; and to provide for access to effective remedies for violations of human rights and domestic laws relating to the environment.[70]

The Framework Principles also outline human rights obligations relating to substantive standards. As noted above, human rights bodies have held that states have discretion in determining the appropriate levels of environmental protection, taking into account the need to balance the goal of preventing all environmental harm with other social goals. However, the establishment and implementation of appropriate levels of environmental protection must always comply with obligations of non-discrimination, and there is a strong presumption against retrogressive measures in relation to the progressive realization of economic, social, and cultural rights. Other factors that human rights bodies have taken into account in assessing substantive environmental standards include whether the government has taken into account relevant international
p. 797 standards, such as those promulgated by the World Health Organization.[71] Once adopted, states ↳ must monitor and effectively enforce compliance with the standards by private actors as well as governmental authorities.[72] With respect to global or transboundary environmental harm that adversely affects human rights, states have obligations of international cooperation.[73]

The obligations of states under human rights law to prohibit discrimination and to ensure equal and effective protection against discrimination apply to the equal enjoyment of human rights relating to the environment. States therefore have obligations, among others, to protect against environmental harm that results from or contributes to discrimination, to provide for equal access to environmental benefits and to ensure that their actions relating to the environment do not themselves discriminate.[74] In addition, states

must take additional steps to protect the rights of those who are particularly vulnerable to or at risk from environmental harm, including environmental human rights defenders and Indigenous peoples.[75]

V. Conclusion

As the three strands of the law of human rights and the environment mature, they increasingly take note of and converge with one another. As noted above, in 2015, the Paris Agreement became the first global environmental agreement to refer explicitly to human rights. The Conference of the Parties to the CBD has adopted guidelines on environmental and social assessment and on consultation with Indigenous peoples and local communities.[76] The Escazú Agreement on procedural access rights, adopted in 2018, provides that 'each Party shall guarantee the right of every person to live in a healthy environment and any other universally-recognized human right related to the present Agreement'.[77] And in 2018, UNEP announced a new 'environmental rights initiative' to support realization of human rights related to the environment.[78]

Conversely, human rights bodies are increasingly referring to international environmental norms. In its 2017 Advisory Opinion, the Inter-American Court of Human Rights indicated that the duties of states in relation to the rights of life and personal integrity must take into account international environmental principles, including the duty to prevent significant environmental harm, the precautionary principle, and
p. 798 the duty of international cooperation.[79] Similarly, the Human Rights Committee, the ↳ treaty body overseeing the ICCPR, stated in 2018 that 'Obligations of States parties under international environmental law should ... inform the contents of article 6 of the Covenant [on the right to life], and the obligation of States parties to respect and ensure the right to life should also inform their relevant obligations under international environmental law'.[80]

Efforts are again underway to convince the UN to recognize the human right to a healthy environment. In 2017, France proposed a Global Pact for the Environment whose first article would recognize the right of every person 'to live in an ecologically sound environment adequate for their health, well-being, dignity, culture and fulfilment'.[81] The UNGA responded to the proposal by creating an ad hoc open-ended working group to discuss possible gaps in international environmental law.[82] In 2018, the outgoing and incoming UN special rapporteurs on human rights and the environment urged the UNGA to recognize the right through a resolution or a treaty such as the Global Pact.[83]

Finally, two potential further lines of development of rights-based approaches to environmental protection should be noted: rights of nature, and rights of future generations.

Legal recognition of rights of nature has long been proposed as a way to protect the intrinsic value of the environment and its components,[84] which an approach focused only on *human* rights may ignore.[85] In recent years, some states have incorporated natural rights in national constitutions, laws, and judicial decisions.[86] At the international level, no treaty explicitly protects rights of nature, and the ECtHR has refused to derive such rights from the European Convention.[87] However, the Inter-American Court recently stated that the American Convention includes an implicit right to a healthy environment that protects environmental components such as forests and rivers, even in the absence of evidence of harm to human
p. 799 life and health.[88] It seems likely that as more ↳ facets of the human dependence on healthy ecosystems become clearer, advocates will increase their efforts to employ human rights norms to protect biodiversity.[89]

International environmental agreements and declarations on sustainable development often emphasize the importance of protecting future generations,[90] in accordance with the Brundtland Commission's famous definition of sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.[91] However, international law has

done little to define the rights of future generations or the obligations of states to them. One potential avenue for further development in this respect may be to clarify the current human rights of children and youth in relation to the long-term but foreseeable future effects of climate change.[92]

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Notes

1 1966 International Covenant on Civil and Political Rights (ICCPR); 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR).

2 See Chapters 14 and 20, 'Earth Jurisprudence' and 'Equity', in this volume.

3 UNGA Res 2398(XXIII), 'Problems of the human environment' (3 December 1968) UN Doc A/RES/2398(XXIII).

4 UN, 'Report of the United Nations Conference on the Human Environment' (5-16 June 1972) UN Doc A/CONF.48/14/Rev.1, 3, ch 1—'Declaration of the United Nations Conference on the Human Environment'.

5 Ibid, principle 1.

6 World Commission on Environment and Development, *Our Common Future* (OUP 1987).

7 *Report of the United Nations Conference on Environment and Development* (UN 1993) vol I, annex I—'Rio Declaration on Environment and Development'.

8 'Human Rights and the Environment—Final report prepared by Mrs. Fatma Zohra Ksentini, Special Rapporteur' (6 July 1994) UN Doc E/CN.4/Sub.2/1994/9, 74, annex I—'Draft principles on human rights and the environment', principle 2. See Neil Popović, 'In Pursuit of Environmental Human Rights: Commentary on the Draft Declaration of Principles on Human Rights and the Environment' *Columbia Human Rights Law Review*, 27/2 (1996): 487.

9 art 24.

10 art 11.1.

11 1998 Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, art 1. Two other regional instruments, the 2004 Arab Charter on Human Rights and the 2012 Association of Southeast Asian Nations (ASEAN) Human Rights Declaration (adopted 18 November 2012) <https://asean.org/asean-human-rights-declaration/> accessed 22 January 2020, each include the right to a 'healthy' (Arab Charter, art 38) or 'safe, clean and sustainable' (ASEAN Declaration, para 28(f)) environment as an element of the right to an adequate standard of living.

12 See David Boyd, 'Catalyst for Change: Evaluating Forty Years of Experience in Implementing the Right to a Healthy Environment' in John Knox and Ramin Pejan (eds), *The Human Right to a Healthy Environment* (CUP 2018) 17. About two-thirds of the constitutional provisions refer to health; alternative formulations include rights to a clean, safe, favourable, or wholesome environment.

13 See generally David Boyd, *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights, and the Environment* (UBC Press 2012); James May and Erin Daly, *Global Environmental Constitutionalism* (CUP 2015).

14 See Lavanya Rajamani, 'Human Rights in the Climate Regime: From Rio to Paris and Beyond' in Knox and Pejan (n 12) 236.

15 See Chapter 21, 'Public Participation', in this volume.

16 arts 4–9.

17 The committee may make recommendations to the Meeting of the Parties and, with the permission of the party concerned, directly to the party; see Decision I/7, 'Review of Compliance' (2 April 2004) UN Doc ECE/MP.PP/2/Add.8, annex.
18 Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, arts 5–8. The agreement was opened for signature in September 2018, and it entered into force in April 2021.
19 art 9.
20 art 18.
21 See eg 1992 UN Framework Convention on Climate Change (UNFCCC), art 6(a); Paris Agreement, art 12; 1994 Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, arts 3(a), 16; 1998 Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, art 15.2; 2001 Stockholm Convention on Persistent Organic Pollutants, arts 7.2, 10.1; 2013 Minamata Convention on Mercury, art 18.1.
22 UNEP, 'Guidelines for the Development of National Legislation on Access to Information, Public Participation and Access to Justice in Environmental Matters' (26 February 2010); see UNEP, *Putting Rio Principle 10 into Action: An Implementation Guide* (2015).
23 See Chapters 32 and 42, 'Wildlife' and 'Indigenous Peoples', in this volume.
24 art 8(j).
25 art 10(c).
26 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, arts 5, 7.
27 UNGA Res 61/295, 'United Nations Declaration on the Rights of Indigenous Peoples' (2 October 2007) UN Doc A/RES/61/295.
28 The UNGA resolution adopting UNDRIP received only four negative votes, from Australia, Canada, New Zealand, and the United States, each of which later reversed its position and indicated support for the declaration.
29 See eg *Kichwa Indigenous People of Sarayaku v Ecuador* (Judgement of 27 June 2012 on Merits, Reparations, Costs) IACtHR Ser C No 245 [187], [215] (Kichwa case); 'Report of the Committee on the Elimination of Racial Discrimination' (28 November 2010) UN Doc A/64/18 (country report on Guatemala) para 40(11); 'Report of the Special Rapporteur on the situation of human rights and fundamental freedoms of indigenous people' (4 September 2009) UN Doc A/64/338, para 48.
30 ILO 169, arts 14–15; UNDRIP, arts 26–27.
31 arts 6, 15, 17.
32 arts 19, 29.2, 32.2.
33 art 29.1.
34 art 15.1.
35 art 15.2.
36 art 32.3.
37 art 28.
38 Neither the Arab Charter nor the ASEAN Declaration creates an oversight body for any of its rights; the reference to most right in art 1 of the Aarhus Convention is not reviewable by its compliance committee; and the rights in the San Salvador Protocol are not subject to review by the Inter-American Commission or Court of Human Rights.
39 *Social and Economic Rights Action Center (SERAC) and the Center for Economic and Social Rights (CESR) v Nigeria*, AComHPR (2001) Communication No 155/96.
40 Ibid [52], [53].
41 *Centre for Minority Rights Development (Kenya) and Minority Rights Group (on behalf of Endorois Welfare Council) v Kenya*, AComHPR (2009) Communication No 276/03.
42 ACtHPR (26 May 2017) No 006/2012.
43 See Lilian Chenwi, 'The Right to a Satisfactory, Healthy, and Sustainable Environment in the African Regional Human Rights System' in Knox and Pejan (n 12) 59.
44 See Council of Europe, *Manual on Human Rights and the Environment* (2nd edn, 2012).
45 (1994) 16798/90 [51].
46 See eg *Hatton v UK* (Judgement) Grand Chamber ECtHR (8 July 2003) Application no 36022/97 [99]–[104].
47 *Taskin and Ors v Turkey* (2004) ECtHR, 46117/99 [119].
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Annex 535

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Oxford Public International Law

Part IV The Content of International Responsibility, Ch.56 The ‘Polluter Pays’ Principle

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(p. 877) Chapter 56 The ‘Polluter Pays’ Principle

1 **The legal value of the ‘polluter pays’ principle** 879

2 **Implementation of the ‘polluter pays’ principle** 881

Further reading 884

> ‘*Nous n’héritons pas la terre de nos ancêtre mais l’empruntons à nos enfants*’. A. Saint Exupery

Humankind has become conscious of the finite character of the world in which we live. Globalization has broadened our horizons, whilst also revealing inexorable limitations, and, curiously, narrowing our temporal view. Focusing on the short and medium term, we scarcely pause to consider the long-term effects of our actions on the planet. Human activity continues to cause increasing damage to the environment, yet the discourse of States in favour of better environmental protection remains limited. According to Dupuy, the ‘paradoxical separation’ between damage to the environment and responsibility bears witness to the infancy of international environmental law.[1] The assertion of some environmental principles, although still uncertain in their substance and implementation, as illustrated by the development of the ‘polluter pays’ principle , evidences a real evolution of the international community whilst also bringing to light the limitations on their effectiveness and the restrictions of the framework within which these principles must operate.

The ‘polluter pays’ principle was initially an economic principle. It could legitimately be questioned whether the principle would lead to the recognition of a right to pollute provided the polluter paid a fair price, as exemplified by the development of the ‘pollution permit’ following the conclusion of the Framework Convention on Climate Change of 9 May 1992.[2] Be that as it may, in 1972 the principle was set out by the OECD. At the time, it was presented as a principle of economic policy and not as a legal rule. In its Recommendation of 26 May 1972, the OECD Council stated that:

> (p. 878) the polluter should bear the expenses of carrying out the … measures decided by public authorities to ensure that the environment is in an acceptable state. In other words, the cost of these measures should be reflected in the cost of goods and services which cause pollution …[3]

The principle thus stated barely responds to environmental concerns, and still less to concerns relating to the law of responsibility. It aimed partially to internalize the costs associated with environmental protection, which would in turn support healthier competition: it was not a question of finding a means of repairing the damage arising from pollution, but of encouraging States not to subsidize industry in the name of the fight against pollution in order to avoid significant distortions in international trade and investment. Hints of this rationale may also be found in the framework of WTO agreements.[4] The ‘polluter pays’ principle thus has its origin in an essentially economic rationale, linked to the development of competition. According to the OECD, the act of forcing operators to build the cost of the fight against pollution into the price of their goods and services—thus passing the ultimate cost on to the end consumer—would encourage the sensible usage of resources. This internalization would guarantee healthy and active competition in all circumstances, preferable to an increase in State aid which could distort the freedom of the market in a similar fashion to anti-competitive practices, restricting efficiency and causing significant imbalances in trade and the flow of international

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investments. However, the ‘polluter pays’ principle has progressively evolved to protect the environment.[5]

During the 1980s and 1990s, the ‘polluter pays’ principle assumed another dimension. On a regional level, first and foremost, the European Community created one of the foundations of its environmental policy by inserting article 130R in the Single European Act.[6] It then implemented the principle in the context of regimes of responsibility,[7] which chiefly correspond today to the Environmental Liability Directive.[8] In a more universal context, this principle began to acquire the status of an essential ‘rule’, or rather a ‘guiding principle’ of international environmental law through Principle 16 of the 1992 Rio Declaration, pursuant to which:

> National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

At the same time, the inclusion of the principle in multilateral conventions relating to pollution increased to the point that making an exhaustive list of these provisions became difficult.[9] The proliferation of conventional references to the ‘polluter pays’ principle (p. 879) have led to its emergence as a fundamental principle of environmental protection,[10] the reality of which can no longer be denied.[11] It is at this level that the principal issues now arise. The imprecision surrounding the conditions for implementing this principle weakens its status and from time to time causes doubt as to whether it has attained the quality of an effective norm of international law, capable of regulating the behaviour of States and their subjects in a manner favourable for the environment. The scope of the ‘polluter pays’ principle remains limited (Section 1) and its practical application proves delicate (Section 2).

1 The legal value of the ‘polluter pays’ principle

International environmental law, founded on pre-emption,[12] is a relatively new law which forms part of the new process for the creation of international law, where the rules less often finds a basis in practice but emphasize *opinio juris*. International environmental law is structured around a series of particularly complementary fundamental principles, often reaffirmed through resolutions or in conventions, but with varying degrees of precision and value. As Dupuy states, it consists of principles in the process of aggregation, the legal value of which may be disputed.[13]

Such is the case for the ‘polluter pays’ principle. According to Kiss and Beurier, it can, at the least, be said that Principle 16 of the Rio Declaration generates uncertainty in relation to the scope of the obligation for the polluter to bear the cost of the pollution he has caused.[14] This is all the more so as the underlying economic stakes appear to remain crucial and must guide the implementation of the principle. Thus in Principle 16 of the Rio Declaration, the economic concerns of the OECD are present, connected to competition. The Rio Decla ration uses a non-binding formulation to indicate that ‘[n]ational authorities *should endeavour to promote*’ internalization of costs, as the ‘polluter should, *in principle*, bear the cost of pollution’.[15] It is clear that the rule, thus expressed, belongs to the domain of soft law. Due to the flexibility of the obligation expressed and the doubts which remain in relation to its content and means of implementation, the ‘polluter pays’ principle leaves a margin of appreciation to States implementing it.

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The conventional texts which refer to the ‘polluter pays’ principle often do not establish effective enforcement mechanisms. Although it is not possible to undertake (p. 880) an exhaustive study of these conventions, it appears that they do not suffice to fill in the gaps in the Rio Declaration so as to clarify the content and improve the effectiveness of the ‘polluter pays’ principle in general international law. Article 2(5)(b) of the Convention of the Protection and Use of Transboundary Watercourses and International Lakes indicates that the acts of the parties are guided by certain principles including that of the ‘polluter pays’ principle by virtue of which ‘costs of pollution prevention, control and reduction measures shall be borne by the polluter’.[16] The 1996 Protocol to the Convention on the Prevention of the Marine Pollution by Dumping of Wastes and Other Matter imposes on the parties an obligation to ‘endeavour to promote’ practices encouraging an approach whereby the polluter should ‘in principle, bear the cost of pollution’.[17] The Convention on the Protection of the Alps obliges the parties to pursue a comprehensive policy for the preservation and protection of the Alps by applying various principles, including the ‘polluter pays’ principle.[18] The Convention for the Protection of the Marine Environment of the North-East Atlantic, without doubt the most precise in its subject matter, provides that the parties should apply the precautionary principle[19] and also the ‘polluter pays’ principle, by virtue of which ‘by the costs of pollution prevention, control and reduction measures are to be borne by the polluter’.[20] The Kiev Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters, signed on 21 May 2003, makes reference in its preamble to the ‘polluter pays’ principle as ‘a general principle of international environmental law’.[21] Article 174(2) of the Treaty Establishing the European Community[22] founded Community environmental policy on certain principles, including the ‘polluter pays’ principle. Without doubt, it has acquired a degree of constraint through consolidation in the framework of the European Union, but it must still be observed that the Treaty itself did not at all define the content of the obligations. Article 174(3) also obliged the Community to develop its environmental policy by taking into account, in particular, economic and social development.

The proliferation of references to the ‘polluter pays’ principle in domestic law,[23] as well as in international conventions supports its emergence as a principle of international environmental law. The flexibility of this ‘soft’ norm, however, is liable to work against its implementation and against respect for a uniform content.

(p. 881) 2 Implementation of the ‘polluter pays’ principle

Poorly defined in terms of content, the ‘polluter pays’ principle ultimately takes shape in diverse forms, which limit its effectiveness. It encourages States to take measures (essentially the adoption of standards and taxes) which enable the prevention of pollution or the reduction of damage to the environment,[24] and it supports attributing the cost to the actual polluter. However, it does not clarify essential questions such as the concept of pollution, the conditions for determining the polluter, the modalities of imputing the pollution to the polluter, and evaluating the costs which should be covered. The implementation of the ‘polluter pays’ principle, notably in the area of international responsibility, depends largely on specific conventional agreements concluded by States and organizations, so that the principle is implemented in domestic legal orders.

Practice shows that where the principle goes beyond a mere economic function to reach an environmental goal, by implication, it shifts a greater measure of costs to the polluter.[25] The costs of prevention and of the fight against pollution therefore tend to be added to the cost of rectifying the damage caused to the environment. In fact, the ‘polluter pays’ principle has evolved to encompass more than an ‘economic function’, but also a ‘preventative function’ and finally a ‘remedial’ function.[26] The ‘polluter pays’ principle has strong ties to other principles, which it supplements without replacing, notably the principle of prevention and the well-established rule of international law which obliges States to ‘ensure that activities

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within their jurisdiction and control respect the environment of other States'.[27] However, the 'polluter pays' principle will only gradually be able to develop to address issues relating to the law of responsibility.[28] It was through the OCED Recommendation on the Application of the Polluter-Pays Principle to Accidental Pollution[29]and the proposal for a Council Directive on Civil Liability for Damage Caused by Waste[30] that the 'polluter pays' principle evolved to encompass questions of responsibility,[31] a development ratified by the European Directive on Environmental Liability.[32] As regards the Rio Declaration, it is significant to note that it only addresses questions of responsibility incidentally through Principle 13. Principle 13 encourages States to legislate regarding liability and compensation for victims of pollution and other environmental damage. It also calls on States to cooperate to develop further international rules regarding liability and compensation for adverse effects of environmental damage within their jurisdiction or under their control. The actions of States through these two mechanisms take account of the 'polluter (p. 882) pays' principle but bring no clarity to the regime of responsibility to be implemented, even as regards the efficacy of this principle. In the work of the ILC on State responsibility, the 'polluter pays' principle does not take further shape: it is generally conceded that State responsibility may be imposed for unlawful acts when the pollution arises from an act of State, or when a State has failed to observe its obligation of 'due diligence'.

However, the ILC encountered difficulties in extending this traditional regime to responsibility for danger to, and also protection of, the environment through fortification of the 'polluter pays' principle. Thus the ILC work concerning the prevention of transboundary damage from hazardous activities is based on the fundamental principle *sic utere tuo ut alienum non laedas*, which may also be found in Principle 21 of the Stockholm Declaration, imposing the following rule: 'The State of origin shall take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof.'[33] Mechanisms and schemes implemented by States should lead to the result that the operator of the activity bears the cost of prevention to the extent that he is responsible for the operation.[34] States are consulted with a view to achieving acceptable solutions regarding measures to be adopted to prevent significant transboundary harm, solutions which must be founded on an equitable balance of interests.[35] Relevant factors in achieving this equitable balance are listed in article 10, including paragraph (d), which provides 'the degree to which the State of origin and, as appropriate, the State likely to be affected are prepared to contribute to the costs of prevention'. In the Commentary to this article, the ILC explains that the equitable balance of interests allows consideration of the 'polluter pays' principle to impute the cost of these measures of prevention first and foremost to the polluter and to the State of origin.[36] However, it must be observed that little may be drawn from this principle: it is only considered indirectly and in its strictest meaning, rather than in its capacity as an instrument of prevention. Finally, broad room to manoeuvre continues to subsist in the implementation of this principle, which contributes to a lack of clarity as to its scope.

Thus the 'polluter pays' principle may contribute to the advancement of the question of responsibility in environment matters. However to do so, it must be consolidated and achieve greater precision. As Kiss states, international responsibility in terms of the environment remains a 'soft obligation', on occasion concerned with ensuring compensation for damage without real consideration of the question of responsibility and often disposing of certain essential questions relating to inter-State relations.[37] The 'polluter pays' principle supports civil liability, creating a direct link between the polluter and the pollution, which does not always guarantee real compensation for the damage caused to the environment and does not contribute to rapid development of public international law. Moreover, it can be questioned whether, in its current form, the 'polluter pays' principle leads to a (p. 883) dilution of responsibility rather than to its imposition. It may be observed that the principle directs modes of environmental responsibility towards private international law to the point

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that it may run the risk of exonerating certain subjects of international law from their share of responsibility for damage to the environment. One can, in this regard, highlight the preference of States for the development of conventional regimes establishing responsibility for private persons and their reluctance to implement a regime of the same order in respect of their own responsibility.[38] The special regimes implemented may give rise to the same questions relating to their frequent imprecision, limitations and exceptions which surround the possibility of bringing into play the liability of the polluter; to reach the maximum or 'mutualization' of the amount of reparations to be paid.

The Lugano Convention, which established a regime of civil liability for damage resulting from activities dangerous to the environment, is without doubt one of the most marked examples of the implementation of the 'polluter pays' principle.[39] The Convention underlines the difficulties encountered in realising the 'polluter pays' principle. The European Commission has underscored the advances made by this Convention—by which it was inspired to elaborate its Environmental Liability Directive—but also its limits, such as its vague definitions and open scope, which provide too little legal certainty for States.[40] Although it represents a considerable step forward in content, the Convention attests to the difficulties which may arise in relation to the implementation of a principle which is, as yet, barely defined. The Convention establishes, in effect, a regime of liability which objectively takes into account the 'polluter pays' principle. This confirms, according to certain writers, that the selection of such a regime is inherent in the application of the principle.[41] The selection of such objective or 'no fault' liability, represents the interest in facilitating the reparation of the damage, which is always more delicate to guarantee when the victim bears the burden of proof of fault on the part of the polluter. The Environmental Liability Directive lays out, alongside no fault liability, which pertains only to specified activities, liability for fault covering all other activities. Within the framework of the Lugano Convention, the question of determining the polluter— particularly difficult in the case of delocalized pollution—is resolved by channelling responsibility to the operator of the causative activity as much as possible where he exercises control over the activity. It is understood that the identification of the polluter is an essential question for the proper implementation of the principle. Treaty practice seems to favour reference to the operator, however, liability may also rest on other people specifically identified as being at the origin of the damage, for example the owner of a ship,[42] the transporter of merchandise, etc.[43]

The 'polluter pays' principle also fails to address the question of the definition of pollution capable of imposing obligations on the polluter. Pollution may be characterized as the violation of a standard, violation of a defined legal threshold, or by destruction of the (p. 884) environment.[44] It seems that objective liability is preferable in the environmental domain, when the damage attains a certain level of gravity. The Environmental Liability Directive defines 'environmental damage' by making reference to a certain level of severity.[45] The Lugano Convention defines both dangerous activity which can give rise to reparation and the damage in question (damage to persons or property, damages resulting from an environmental change), but also includes an exemption from liability for the operator, *inter alia*, where the damage 'was caused by pollution at tolerable levels under local relevant circumstances'.[46] The other exemptions from liability offered to the operator are more traditional, including acts of war, acts committed by a third party, acts committed in compliance with a specific order or compulsory measure of a public authority, and activity taken in the interests of the person who suffers the damage.[47]

Finally, the realization of the 'polluter pays' principle is rendered more difficult by the confusion surrounding the costs to be charged to the polluter. It has been suggested that these costs now tend towards recovering the amounts integral to prevention, to monitoring respect for antipollution norms and reparation of the damage caused. Again, the principle is imprecise on this point, and leaves a broad margin of appreciation to the subjects of international law, which they may exploit to limit the costs which are likely to be imposed

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on their essential economic activities. The cost of the obligation to make reparation placed on the polluter may moreover be limited, as the State or an insurance agency contributed to the cost of reparation. In the Lugano Convention, it is simply stated that the contracting parties must be vigilant so that operators participate in financial security schemes and maintain financial guarantees.[48] The 1992 Convention on Civil Liability for Oil Pollution Damage, like the 2003 Kiev Protocol, fixes a limit on the amount of available compensation, a rationale which may also be found in numerous other conventions.[49]

In its broadest form the 'polluter pays' principle may contribute to the development of a regime of international responsibility in environmental law, of which Professor Dupuy has demonstrated the limits.[50] However, at present this principle remains too imprecise to cross the threshold necessary to form the basis of a rule of international law.

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5 N de Sadeleer, *Les principes du pollueur-payeur, de prévention et de précaution: Essai sur la genèse et la portée juridique de quelques principes du droit de l'environnement* (Brussels, Bruylant, 1999), 52.

6 New art 174§2.

7 L Kramer, 'Le principe du polllueur-payeur en droit communautaire—interprétation de l'article 130 R du traité C.E.E.' (1991/1) *amen.-env.* 3.

8 Environmental Liability Directive (2004/35/CE), 21 April 2004; JO L 143, 30 April 2004.

9 Eg International Convention on Oil Pollution Preparedness, Response and Cooperation, London, 30 November 1990, 1891 *UNTS* 77; Convention on the Protection of the Alps, 7 November 1991, 31 *ILM* 767; Convention of the Protection and Use of Transboundary Watercourses and International Lakes, Helsinki, 17 March 1992, 31 *ILM* 1312; Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, Lugano, 21 June 1993, 32 *ILM* 480; Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 22 September 1992, 32 *ILM* 1228. The brevity of this chapter does not allow citation of all relevant conventions, however, for a more complete study see N de Sadeleer, *Les Principes du pollueur-payeur, de prévention et de précaution: Essai sur la genèse et la portée juridique de quelques principes du droit de l'environnement* (Brussels, Bruylant, 1999), 53–54; OB Vignon, 'Le principle pollueur-payeur, un état du droit positif', Thesis, University of Nice, 1998, 66–69; 'Survey of liability regimes relevant to the topic of international liability for injurious consequences arising out of acts not prohibited by international law (international liability in case of loss from transboundary harm arising out of hazardous activities)', A/CN.4/543, 2004, 89–219.

10 H Smets, 'Le principe pollueur-payeur, un principe économique érigé en principe de l'environnement' (1997) 101 *RGDIP* 5.

11 P-M Dupuy, 'Où en est le droit international de l'environnement' (1997) 101 *RGDIP* 874, 891.

12 M Kamto, 'Singularité du droit international de l'environnement', in M Prieur & C Lambrechts (eds) *Les hommes et l'environnement; Etudes en hommage à Alexandre Kiss* (Paris, Frison-Roche, 1998), 319.

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13 P-M Dupuy, 'Où en est le droit international de l'environnement' (1997) 101 *RGDIP* 874, 892.

14 AC Kiss & JP Beurier, *Droit international de l'environnement* (3rd edn, Paris, Pedone, 2004), 144ff.

15 Emphasis added.

16 Convention of the Protection and Use of Transboundary Watercourses and International Lakes, Helsinki, 17 March 1992, 31 *ILM* 1312.

17 1996 Protocol to the Convention on the Prevention of the Marine Pollution by Dumping of Wastes and Other Matter, 36 *ILM* 1, art 3(2).

18 Convention on the Protection of the Alps, 7 November 1991, 31 *ILM* 767, art 2(1).

19 Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 22 September 1992, 32 *ILM* 1228, art 2(a).

20 Ibid, art 2(b).

21 Kiev Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters, 2003, Doc. MP.WAT/2003/1, CP.TEIA/2003/3.

22 Consolidated Version of the Treaty Establishing the European Community, OJ, C-325, 24/12/2002; see now, art 191-2, Consolidated version of the Treaty on the Functioning of the European Union, OJ C-115/47, 9/5/2008.

23 For example, the environmental charter incorporated in the Preamble to the French Constitution: R Romi, 'Les principes du droit de l'environnement et la charter constitutionelle: "jouer le jeu" ou mettre les principes "hors-jeu"?' (2003) RJE No spécial; M Prieur, 'Vers un droit de l'environnement renouvelé', *Cahiers du Conseil Constitutionnel* no 15.

24 N de Sadeleer, *Les principes du pollueur-payeur, de prévention et de précaution: Essai sur la genèse et la portée juridique de quelques principes du droit de l'environnement* (Brussels, Bruylant, 1999), 50ff.

25 H Smets, 'Le principe pollueur-payeur, un principe économique érigé en principe de l'environnement' (1997) 101 *RGDIP* 5, 340–355.

26 N de Sadeleer, *Les principes du pollueur-payeur, de prévention et de précaution: Essai sur la genèse et la portée juridique de quelques principes du droit de l'environnement* (Brussels, Bruylant, 1999), 69.

27 *Gabcíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, ICJ Reports 1997*, p 7, 41 (para 53), quoting *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, ICJ Reports 1996*, 241–242 (para 29).

28 JAP Ridrujedo, 'Le droit international à la veille du 21ème siècle: normes, faits et valeurs' (1998) 278 *Recueil des cours* 289.

29 OECD Recommendation C(89)88, 7 July 1989.

30 COM (89) 282 final, 15 September 1989.

31 S Gaines, 'The Polluter-Pays Principle: from Economic Equity to Environmental Ethos', 26 *Texas Journal of International Law* 482.

32 Directive 2004/35/CE of the European Parliament and of the Council, 21 April 2004.

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33 See draft art 3, Draft Articles on prevention of transboundary harm from hazardous activities, Report of the ILC, 53rd Session, ILC Yearbook 2001, Vol II(2), 146 and Commentary to draft art 3, para 1, ibid, 153. In 2006 the ILC also adopted Draft Principles on the allocation of loss in the case of transboundary harm arising from hazardous activities; these principles—indirectly—taking into account the polluter-pays principle See Report of the ILC, 58th Session, 2006, A/61/10, 101–182, especially 144–149; and see GA Res 61/36, 4 December 2006).

34 Draft Articles on prevention of transboundary harm from hazardous activities, Commentary to draft art 3, para 15, Report of the ILC, 53rd Session, ILC Yearbook 2001, Vol II(2), 155.

35 Draft art 9, ibid, 147,

36 Commentary to draft art 10, ibid, 162ff.

37 AC Kiss & JP Beurier, *Droit international de l'environnement* (3rd edn, Paris, Pedone, 2004), 377.

38 Cf P Daillier & A Pellet, *Droit international public (Nguyen Quoc Dinh)* (6th edn, Paris, LGDJ), 482ff.

39 Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, Lugano, 21 June 1993, 32 *ILM* 480.

40 White Paper on Environmental Liability, COM(2000) 66 final, 9 February 2000, 25.

41 Cf N de Sadeleer, *Les principes du pollueur-payeur, de prévention et de précaution: Essai sur la genèse et la portée juridique de quelques principes du droit de l'environnement* (Brussels, Bruylant, 1999), 90.

42 International Convention on Civil Liability for Oil Pollution Damage. Brussels, 29 November 1969, 9 *ILM* 45.

43 Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels, 1 February 1990, UN Doc ECE/TRANS/79.

44 N de Sadeleer, *Les principes du pollueur-payeur, de prévention et de précaution: Essai sur la genèse et la portée juridique de quelques principes du droit de l'environnement* (Brussels, Bruylant, 1999), 70–72.

45 Eg 'that has significant adverse effects', 'that significantly adversely affects': art 2, Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, Lugano, 21 June 1993, 32 *ILM* 480.

46 Ibid, art 8(d).

47 Ibid, art 8(a)–(e).

48 Ibid, art 12.

49 Cf. A/CN.4/543.

50 P-M Dupuy, 'A propos des mésaventures de la responsabilité internationale des États dans ses rapports avec la protection internationale de l'environnement', in M Prieur & C Lambrechts (eds), *Les hommes et l'environnement; Etudes en hommage à Alexandre Kiss* (Paris, Frison-Roche, 1998), 270.

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C. Voigt, *State Responsibility for Damages associated with Climate Change,* in RESEARCH HANDBOOK ON CLIMATE CHANGE LAW AND LOSS & DAMAGE, eds. Meinhard Doelle and Sara L. Seck (Edward Elgar Publishing Limited, 2021)

9. State responsibility for damages associated with climate change

Christina Voigt

1. INTRODUCTION

The purpose of this chapter is to analyse the current international legal framework for addressing damages associated with climate change and to reflect on opportunities for international law to evolve to deal more effectively with climate damage claims than is the case under the current state of the law.

Scientists have warned over many decades about the human impact on the climate system. But they have *never* spoken so clearly, and never with greater certainty and urgency, as in the 6th Assessment Report and recent special reports of the Intergovernmental Panel on Climate Change (IPCC).[1]

The IPCC states that global warming is likely to reach 1.5°C above pre-industrial levels between 2030 and 2052, if current rates continue. Such warming will increase the probability of severe droughts and heavy precipitation in several regions, lead to sea-level rise and increased ocean stratification, impact biodiversity and ecosystems and create significant climate-related risks to health, livelihoods, food security, water supply and human security. The impacts intensify and self-enforce with greater warming. Moreover, at global warming of 1.5°C, most natural and human systems will reach the limit of their adaptive capacity, meaning that warming above and beyond that level leads to abrupt and unpredictable change. And yet, we are currently headed towards a 3–4°C world.[2]

The time-span for making informed decisions is short. According to scientists, a fundamental, system-wide reorganization spanning technological, economic and social factors

[1] IPCC, 2021: Summary for Policymakers, in: *Climate Change 2021: The Physical Science Basis, Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Pean, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekci, R Yu and B. Zhou (eds.)] Cambridge University Press; Valérie Masson-Delmotte and others, 'Global Warming of 1.5°C: An IPCC Special Report on the Impacts of Global Warming of 1.5°C Above Pre-industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty' (Intergovernmental Panel on Climate Change 2018) Summary for Policy Makers; Priyadarshi R Shukla and others, 'Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems' (Intergovernmental Panel on Climate Change 2019) Summary for Policy Makers; Hans-Otto Pörtner and others, 'Special Report on the Ocean and Cryosphere in a Changing Climate' (Intergovernmental Panel on Climate Change 2019).

[2] UNEP, *The Emissions Gap Report 2018* (United Nations Environmental Program 2018) <https://wedocs.unep.org/bitstream/handle/20.500.11822/26895/EGR2018_FullReport_EN.pdf?sequence=1&isAllowed=y> accessed 7 October 2020.

needs to happen within the next 10–15 years.[3] Thereafter, such transformative changes may come too late and we will have to deal with the consequences of our collective inaction, which most likely will be unravelling and catastrophic. The consequences are highly likely to include adverse effects for, and impose associated damages on, countries, communities and individuals.

In the context of the UN climate change regime, climate-related damages are currently understood as 'the actual and/or potential manifestation of impacts associated with climate change that negatively affect human and natural system'.[4] However, an effective response to addressing such damages when they occur is not in place.

In recognizing the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change – including extreme weather events and slow-onset events – and the role of sustainable development in reducing the risk of loss and damage, Article 8 of the Paris Agreement drew upon the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM), originally established under the UNFCCC,[5] under the authority and guidance of its own governing body.[6]

The negotiations on the issue of loss and damage were highly contentious, with the concerns of the most vulnerable states, especially small island developing states, clashing with those of major emitters who feared being held liable. With respect to loss and damages, the Agreement therefore merely encourages Parties to enhance understanding, action and support, including through the WIM, as appropriate, on a cooperative facilitative basis. Moreover, as part of the compromise, it was agreed that the decision adopting the Paris Agreement contained a clause that excludes any liability or compensation under Article 8.[7] However, the clause adopted in paragraph 51 of decision 1/CP.21 does not appear to exclude liability on the basis of other articles of the Paris Agreement, or on the basis of other treaties, or on the basis of customary international law.

Outside the UN negotiations, states suffering from negative climate impacts and resulting damages may wish to seek remedy from other states for their losses. At the time of writing there is no compensation claim pending in any international court or tribunal, but initiatives by states and affected groups to cover their losses are growing in number. Several examples exemplify this trend. An early example is the 2005 Inuit Petition to the Inter-American Commission on Human Rights.[8] Here, the petitioners requested the Commission, *inter alia*,

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[3] 'Global Warming of 1.5°C' (n 1).

[4] UNFCCC, 'Background Paper to the Expert Meeting on: A Range of Approaches to Address Loss and Damage Associated with the Adverse Effects of Climate Change, Including Impacts Related to Extreme Weather Events and Slow Onset Processes' (Bridgetown, Barbados, 9–11 October 2012) <http://unfccc.int/files/adaptation/cancun_adaptation_framework/loss_and_damage/application/pdf/literature_review_barbados.pdf> accessed 8 July 2020.

[5] UNFCCC, Warsaw International Mechanism for Loss and Damage Associated With Climate Change Impacts (*Decision 2/CP.19*); see Chapter 5, Siegele and Chapter 6, Siegele.

[6] United Nations, *Paris Agreement* (2015) Art 8.2; UNFCCC, *Warsaw International Mechanism for Loss and Damage Associated With Climate Change Impacts and its 2019 Review* (Decision 2/CMA.2 and 2/COP.25); See Chapter 5, Siegele and Chapter 6, Siegele.

[7] UNFCCC, *Adoption of the Paris Agreement* (Decision 1/CP.21) para 51.

[8] Sheila Watt-Cloutier, 'Petition to the Inter-American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States' (Inuit Circumpolar Conference 7 December 2005) <https://secureservercdn.net/104.238.71.250/hh3.0e7.myftpupload.com/wp-content/uploads/finalpetitionicc.pdf> accessed 24 October 2020.

to prepare a report setting forth all the facts and applicable law and recommending that the United States mitigate any harm to natural resources caused by US greenhouse gas emissions and provide any other relief that the Commission considers appropriate and just. The Petition led to a hearing by the Commission but no decisive action.[9]

Another attempt included the 2011 request from a group of small island nations, headed by Palau, to the United Nations General Assembly to seek an Advisory Opinion from the International Court of Justice on the legal responsibility of nations whose corporations cause international harm through contributing to climate change.[10] However, this request never got off the ground.

More recently, in 2019, Vanuatu started discussing legal action for climate justice. The country entertains the proposal that the UN General Assembly should adopt a resolution requesting an Advisory Opinion from the ICJ or the International Tribunal on the Law of the Sea (ITLOS) on the duties of states to protect the rights of present and future generations against the adverse effects of climate change.[11]

A broad definition of climate damages could also include human rights violations caused by climate change impacts. In this context, the recent communication by 16 children to the UN Committee on the Rights of the Child against five states (Argentina, Brazil, Germany, France and Turkey) is noteworthy. The petitioners do not seek compensation, because, as they state, 'no amount of money could compensate for the harm children are and will be suffering from climate change, both now and in the future'.[12] Instead they request that the Committee adopt recommendations for precautionary, declaratory and remedial relief. They claim that each respondent, along with other states, has caused and is perpetuating the climate crisis by knowingly acting in disregard of the available scientific evidence regarding the measures needed to prevent and mitigate climate change. By recklessly perpetuating life-threatening climate change, each respondent is violating the petitioners' rights to life, health and the prioritization of the child's best interests, as well as the cultural rights of the petitioners from indigenous communities. Therefore, cooperative international action to establish binding and enforceable

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[9] See Chapter 11, Lofts.

[10] United Nations, *Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law* (60th Session, A/RES/60/147 21 March 2006); UN, 'Palau Seeks UN World Court Opinion on Damage Caused by Greenhouse Gases' *UN News* (22 September 2020) <www.un.org/apps/news/story.asp?NewsID=39710&Cr=pacific+island&Cr1> accessed 8 July 2020; 'Bangladesh Looks to Courts for Climate Help' *Al Jazeera* (24 September 2012) <www.aljazeera.com/video/asia/2012/09/201292412114954676 4.html>. Already in 2002, Tuvalu Prime Minister Falcam had declared that his country was seeking to sue the USA and/or Australia for climate damages, but, due to political changes, proceedings were never initiated (Reuters, 'Tuvalu Seeks Help in US Global Warming Lawsuit' *World Environmental News* (30 August 2002) <www.planetark.org> accessed 16 March 2010).

[11] Vanuatu, 'Vanuatu Hosts High-profile Event on Legal Action for Climate Justice' *Dailypost* (3 October 2019) <https://dailypost.vu/news/vanuatu-hosts-high-profile-event-on-legal-action-for-climate/article_4f58e312-e7f3-11e9-b713-2b437f0c7f2f.html> accessed 11 October 2019.

[12] 'Communication to the Committee on the Rights of the Child' (Submitted under Article 5 of the Third Optional Protocol to the United Nations Convention on the Rights of the Child, 23 September 2019) <https://earthjustice.org/sites/default/files/files/CRC-communication-Sacchi-et-al-v.-Argentina-et-al.pdf> accessed 11 October 2019.

measures to mitigate the climate crisis, prevent further harm to the petitioners and other children and secure their inalienable rights should be initiated.[13]

In any case, the possibility to seek compensation from a state for damages follows from the concept of 'state responsibility'. Under general international law the obligation of a state to give remedial relief and/or make full reparation, which can take the form of restitution, compensation and/or satisfaction, depends upon a successful claim based on the responsibility of a state for a wrongful act.[14]

While damage is, arguably, not a condition for the existence of a wrongful act and the invocation of state responsibility, it remains a requirement in the context of reparation and, in particular, compensation.[15] The secondary law on state responsibility carries with it the obligation of full reparation, 'including any damage, whether material or moral'.[16]

Against this background, the purpose of this chapter is to (i) explore the concept of state responsibility in some detail, (ii) analyse the conditions that need to be met in order to give rise to responsibility for climate change-related damages, and (iii) provide some reflections.

2. DEFINITION: AN ATTEMPT

In general, *state responsibility* refers to the accountability of a state for a violation of international law and is premised upon an internationally wrongful act which can be attributed to that state.[17] Such internationally wrongful act can arise from the breach of an international legal obligation ('primary law'), established by treaty (for example, in bilateral or multilateral environmental agreements) or by a customary norm of international law (for example, the prohibition of significant environmental harm).[18] The consequences of international responsibility for a wrongful act are the obligation of the wrongdoer to cease that act, to offer assurances of non-repetition and to make full reparation of the injury caused by the internationally wrongful act, including compensation for environmental damage.[19]

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[13] Ibid 7–8.

[14] International Law Commission, *Draft Articles on Responsibility of States for Internationally Wrongful Acts* (Annex to General Assembly Resolution 56/83, as corrected by document A/56/49(Vol. I)/Corr. 4, United Nations 2015) Art 35.

[15] Hanquin Xue, *Transboundary Damage in International Law* (Cambridge University Press 2003); Roda Verheyen, *Climate Change Damage and International Law*: *Prevention Duties and State* (Martinus Nijhoff 2005); Christina Voigt, 'Climate Change Damages and State Responsibility' (2008) 77 *Nordic Journal of International Law* 1, 1–22.

[16] International Law Commission, *Draft Articles on Responsibility of States for Internationally Wrongful Acts* (n 14) Art 31.

[17] James Crawford, *State Responsibility: The General Part* (Cambridge Studies in International and Comparative Law, Cambridge University Press 2013) 3–44.

[18] See generally James Crawford, *The International Law Commission's Articles on State Responsibility: Introduction, Text and Commentaries* (Cambridge University Press 2002); James Crawford, Alain Pellet and Simon Olleson (eds), *The Law of International Responsibility* (Oxford University Press 2010).

[19] International Law Commission, *Draft Articles on Responsibility of States for Internationally Wrongful Acts* (n 14) Arts 30, 31.

3. INITIATIVES BY THE ILC

The International Law Commission (ILC) has long worked on the environmental responsibility and liability of states. Three projects are relevant: the 2001 Articles on Responsibility of States for Internationally Wrongful Acts[20] (Articles on State Responsibility); the 2001 Articles on the Prevention of Transboundary Harm from Hazardous Activities (Articles on Transboundary Harm);[21] and the 2006 Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities (Principles on Allocation of Loss).[22]

The latter two works resulted from the topic of 'Responsibility for injurious consequences arising out of acts not prohibited by international law' which was included in the ILC's agenda in the late 1970s. The item 'Consideration of prevention of transboundary harm from hazardous activities and allocation of loss in the case of such harm' remains under the consideration of the General Assembly. Through several resolutions since 2010[23] the General Assembly has commended the articles and the principles to the attention of governments, without prejudice to any future action, as recommended by the ILC. The General Assembly has also requested that the Secretary-General submit a compilation of decisions of international courts, tribunals and other bodies referring to the articles and the principles and decided to include the item in the provisional agenda of its 74th session in 2019.[24]

4. INTERNATIONAL CLIMATE CHANGE LAW AND STATE RESPONSIBILITY

The ILC Articles on State Responsibility (ASR) set out that '[e]very internationally wrongful act of a state entails the international responsibility of that state'.[25] It is a clear requirement that in order for a state to be legally responsible for an internationally wrongful act (or omission) and to incur the legal consequences of such responsibility, the act or omission must constitute a breach of an international obligation of that state, and be attributable to it.[26]

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[20] UNEP (n 2).

[21] International Law Commission, *Prevention of Transboundary Harm from Hazardous Activities 2001* (United Nations 2005) <http://legal.un.org/docs/?path=../ilc/texts/instruments/english/draft_articles/9_7_2001.pdf&lang=EF> accessed 8 July 2020.

[22] International Law Commission, *Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities, with Commentaries 2006* (United Nations 2006) <https://legal.un.org/ilc/texts/instruments/english/commentaries/9_10_2006.pdf> accessed 8 July 2020.

[23] United Nations General Assembly, *Resolution 65/28 of 6 December 2010* (65th Session, A/RES/65/28 2011); United Nations General Assembly, *Resolution 68/114 of 16 December 2013* (68th Session, A/RES/68/114 2013); United Nations General Assembly, *Resolution 71/143 of 13 December 2016* (71st Session, A RES/71/143 2016).

[24] General Assembly of the United Nations, 'Sixth Committee (Legal) – 71st Session' (United Nations) <www.un.org/en/ga/sixth/71/prevention_of_harm.shtml> accessed 11 July 2020.

[25] UNEP (n 2) Art 1.

[26] Ibid Art 2.

4.1 Breach of an International Obligation: Treaty Law

In order to establish state responsibility, a state must have conducted an internationally wrongful act. Such act can be an action or an omission. Responsibility for climate-related damages could arise because of the breach of an international treaty or a customary obligation. A number of treaties could be relevant, such as the UNFCCC and the Paris Agreement adopted under it, but also, for example, the United Nations Convention on the Law of the Sea (UNCLOS), the Convention Concerning the Protection of the World Cultural and Natural Heritage or the Straddling Fish Stocks Agreement,[27] the Convention on Biological Diversity, the Aarhus Convention on Access to Justice, the Convention on Long-Range Transboundary Air Pollution, the Montreal Protocol to the Vienna Convention on the Protection of the Ozone Layer or human rights treaties. Due to limitations of space, this chapter deals only with the question of whether the UNFCCC, the Kyoto Protocol or the Paris Agreement contain duties of states to avoid climate-related harm which may be breached and give rise to international responsibility.

4.1.1 UNFCCC

The UNFCCC is a *framework* agreement, and is broad and general in nature. It is difficult to identify specific state obligations on the basis of the general obligations included in the Convention.

However, it has been claimed that the ultimate objective of the UNFCCC, as formulated in Article 2, might be interpreted as a *duty of prevention* of dangerous interference with the climate system, including, but not limited to, avoiding climate-related damages.[28] Scientific research shows high confidence that an increase in global average temperature at or above 2°C compared to pre-industrial average temperatures will have dangerous implications for human welfare, life and health.[29] Following this, the question is whether there are legal obligations of Parties to act in accordance with the ultimate objective. Could, for example, Article 4.1 UNFCCC be interpreted as entailing a concrete obligation for all Parties to reduce their GHG emissions in order to achieve the objective? Article 4.1 UNFCCC, when interpreted in a teleological way in the light of the object and purpose of the Convention, according to Article 31 Vienna Convention on the Law of Treaties (VCLT), could be read to contain an 'obligation of conduct' to reverse the long-term trend of ever-increasing GHG emissions and to reduce them to the best possible extent, according to national circumstances. Articles 2 and 4.1 UNFCCC together could therefore be understood as a primary obligation for all Parties, which, when breached, establishes a wrongful act.

Such breach is committed where a Party is taking no or insufficient measures to modify upward emission trends. This argument could also be supported by reference to Article 18

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[27] *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* (4 August 1995, Entered into force on 11 December 2001, 2167 UNTS 3).

[28] Verheyen (n 15) 174.

[29] Scientific studies since, including the IPCC's Fifth Assessment Report in 2014, have underpinned the arguments for keeping within this limit (Rajendra K Pachauri and others (eds), *Climate Change 2014: Synthesis Report Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Intergovernmental Panel on Climate Change 2014)).

VCLT and the principle of good faith. In accordance with this provision, every Party to the Convention has the legal obligation not to 'defeat' the objective of Article 2 UNFCCC. Not taking measures towards reversing emission trends, however, defeats the objective. If a Party has increased its emissions continually since its ratification of the UNFCCC, this could amount to a breach of that treaty.

4.1.2 Kyoto Protocol

The Kyoto Protocol similarly does not contain specific legal obligations to prevent dangerous climate change. The quantified emissions limitation and reduction obligation of Annex I Parties were politically motivated and negotiated; they do not amount to targets effective to prevent dangerous climatic change. Still, these targets are legally binding and set out specific obligations for the respective Party. The targets applying to the second commitment under the Kyoto Protocol period became legally binding upon the entry into force of the Doha Amendment on 31 December 2020.[30] Non-compliance with those targets will amount to a breach of a treaty-based obligation, and could potentially give rise to state responsibility.

4.1.3 Paris Agreement

The Paris Agreement specifies the Convention's climate change mitigation goal in Articles 2.1(a) and 4.1. Article 2.1(a) sets out the purpose of the Agreement as 'holding the increase in the global average temperature to well below 2°C above pre-industrial levels, and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels'. Article 4.1 contains specific mitigation action in line with those temperature goals. Articles 2.1(a) and 4.1 have been concretized by the 2018 IPCC 'Special Report on Global Warming of 1.5 Degrees', which states that holding temperature increases to (or with limited overshoot of) 1.5°C implies 'pathways [where] global net anthropogenic CO_2 emissions decline by about 45% from 2010 levels by 2030 […], reaching net zero around 2050'.[31] 'For limiting global warming to below 2°C […] CO_2 emissions are projected to decline by about 25% by 2030 […] and reach net zero around 2070.'[32] For both temperature goals, global net CO_2 emissions have to remain net negative (that is, below zero) thereafter. How far below zero CO_2 removal must reach until the end of this century (and most likely far beyond) depends on the speed and scale of reaching net zero emissions. The more CO_2 emitted before 2050, the deeper below zero removals will have to go thereafter.

The obligation of Parties to put forward nationally determined contributions (NDCs) in Article 4.2 needs to be interpreted in light of these goals. Despite the fact that the objectives of such contributions are not legally binding (Article 4.2(2)) and no obligation of result exists – that is, in achieving the NDC – there applies nevertheless an obligation of conduct according to which each Party's NDC will reflect its highest possible ambition (Article 4.3). While at first glance this provision seems rather mild, it is in fact a potent and powerful legal tool. 'Highest possible ambition' is reflective of a duty of care that Parties need to exercise. It implies a due diligence standard which requires each Party to act in proportion to the long-term temperature

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[30] Decision 1/CMP.8; See also UNFCCC, 'The Doha Amendment' (United Nations) <https://unfccc.int/process/the-kyoto-protocol/the-doha-amendment>.

[31] 'Global Warming of 1.5°C' (n 1) C.1.

[32] Ibid.

goals and to the risk at stake.[33] With that, each Party has committed to taking all appropriate and adequate climate mitigation measures according to its best capabilities and its responsibility in order to successively and progressively achieve the objective of the agreement: to keep global temperature increases well below 2°C in order to avoid dangerous anthropogenic interference with the climate system.

The provision expresses the requirement that each Party will deploy its best efforts in setting its national mitigation targets in its NDC and in pursuing domestic measures to achieve them. Article 4.3 establishes for each Party the standard of conduct to aspire to in order to attain its highest possible ambition in a manner that reflects its national circumstances, that is, its responsibilities and capabilities.

This due diligence standard, well known in international law,[34] means that Parties need to set their highest possible mitigation target at a level that is not economically disproportionately burdensome or impossible to achieve. Such a target should be comprehensive and based on a thorough assessment of all mitigation options and potential in all relevant sectors. Parties would need to exhaust all political, legal, socio-economic, financial and institutional capacities and possibilities in defining such target. They would need to plan their climate strategies holistically and within a long-term time frame. It also requires Parties to have domestic measures in place that are necessary, meaningful and, indeed, effective means to achieve that target.[35] Parties need to be explicit about the choice of the mitigation target, and why it is at the level of highest possible ambition (or not). The 'Rulebook' for the effective implementation of the Paris Agreement requires that Parties put forward information in their NDC on how they addressed Article 4.3 of the Paris Agreement.[36]

Due diligence has been described as the conduct that can reasonably be expected of a good government in the same situation.[37] This is (or at least it could be argued that it is) an objective criterion. It means taking all appropriate and necessary measures to address private behaviour, including adopting necessary regulatory measures, their monitoring and their enforcement.[38]

It also requires governments to act in proportion to the risk at stake, and with foresight.[39] In the *Pulp Mills* case the ICJ pointed out 'that the principle of prevention, as a customary rule, has its origins in the due diligence that is required of a State in its territory'.[40] Also, the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea, in its *Seabed*

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[33] Christina Voigt and Felipe Ferreira, '"Dynamic Differentiation": The Principles of CBDR-RC, Progression and Highest Possible Ambition in the Paris Agreement' (2016) 5(2) *Transnational Environmental Law* 285.

[34] Christina Voigt, 'The Potential Roles of the ICJ in Climate Change-related Claims' in Daniel A Farber and Marjan Peeters (eds), *Climate Change Law: Encyclopedia of Environmental Law* (Edward Elgar Publishing 2016) 152–66.

[35] Ibid.

[36] Decision 4/CMA.1, Annex, paragraph 6(c).

[37] Alwyn V Freeman, 'Responsibility of States for Unlawful Acts of their Armed Forces' in Hague Academy, *Collected Courses of the Hague Academy of International Law* (vol 88 1955) 263, 277–78.

[38] 'Pulp Mills on the River Uruguay (Argentina v Uruguay)' (ICJ Reports 2010) 14, 77 para 187; 'Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area' (Advisory Opinion, International Tribunal for the Law of the Sea 1 February 2011) 10.

[39] International Law Commission, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with Commentaries 2001* (n 21) Art 3(7).

[40] 'Pulp Mills on the River Uruguay' (n 38) 55 para 101.

Mining Advisory Opinion, emphasised that precaution is, in effect, part of due diligence,[41] and recognized that 'due diligence' may impose more rigorous requirements for riskier activities.

The ITLOS Tribunal further expanded on the concept of due diligence in its 2015 *Sub-Regional Fisheries Commission Advisory Opinion*.[42] It found that taking all necessary measures included enforcement mechanisms to monitor and secure compliance with laws and regulations and the application of sufficient sanctions to deter violations and to deprive offenders from benefits accruing from illegal activities.[43] Furthermore, it was observed that due diligence is a standard that varies according to context.[44] It is understood that the degree of care expected of a state with a well-developed economy and human and material resources, and with highly evolved systems and structures of government, is different from that expected of states which are not so well placed. However, the economic level of a state cannot entirely relieve that state of its obligations.[45]

As mentioned above, Article 4.3 of the Paris Agreement is a treaty-based expression of due diligence, where each Party has committed to taking all appropriate and adequate climate change mitigation measures in order to achieve the long-term temperature goals of the Agreement, as expressed in its Article 2.1.[46] In light of science, this implies taking all measures that are not disproportionately economically burdensome with the objective of reducing GHG emissions to net zero and below by 2050. It also implies that some Parties, according to their responsibilities and capabilities, will need to reach net-zero targets much earlier than 2050, in order to enable Parties that might take longer to still get there around 2050.

A communication by 16 children to the UN Committee on the Rights of the Child takes up this line of argumentation.[47] The petitioners claim that each respondent (Brazil, Argentina, France, Germany and Turkey) has failed to prevent foreseeable human rights harms caused by climate change by not reducing its emissions at the level of its 'highest possible ambition'. Each respondent is delaying the steep cuts in emissions needed to protect the lives and welfare of children at home and abroad.

To meet this obligation, all states must take all necessary and appropriate measures and, as the Committee on Economic, Social, and Cultural Rights ('CESCR') observed, use their 'maximum available resources'. In order for states to comply with their human rights obligations, and to realize the objectives of the Paris Agreement, they must adopt and implement policies in their NDC aimed at reducing emissions, which reflect the highest possible ambition,

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[41] 'Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area' (n 38).

[42] 'Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission' (Advisory Opinion, International Tribunal for the Law of the Sea 2 April 2015) 4.

[43] Ibid para 138.

[44] Ibid para 117.

[45] Timo Koivurova, 'Due Diligence' (*Max Planck Encyclopedia of Public International Law*, 2010) <https://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e1034?rskey=hEeO85&result=1&prd=MPIL> accessed 11 July 2020.

[46] Christina Voigt, 'The Paris Agreement: What Is the Standard of Conduct for Parties?' (2016) *Questions of International Law* 17, 26 <www.qil-qdi.org/paris-agreement-standard-conduct-parties/> accessed 11 July 2020; Voigt and Ferreira (n 33).

[47] 'Communication to the Committee on the Rights of the Child in the case of Chiara Sacchi et al v Argentina, Brazil, Germany, France and Turkey' (Submitted under Article 5 of the Third Optional Protocol to the United Nations Convention on the Rights of the Child 23 September 2019).

foster climate resilience and ensure that public and private investments are consistent with a pathway towards low carbon emissions and climate-resilient development.[48]

In sum, due diligence is the conduct that can be reasonably expected from a state. The standard of due care must be determined on a case-by-case basis with regard to a country's obligation to reduce the risk of environmental harm under national circumstances compared to the best conduct expected of a state in similar circumstances.

In sum, it implies that every state ought to employ its highest possible level of ambition or standard of protection and act according to its best capabilities, or 'do as well as it can'. This level is more rigorous if the risk is higher – such with climate change – and involves the requirement for a state to use its 'maximum available resources' – as long as it is not disproportionately burdensome – to address this risk.

Moreover, Parties have to communicate successive NDCs every five years (Article 4.9). Each successive NDC has to progress beyond previous undertakings (Article 4.3). A Party's changing circumstances (such as a financial, political and/or economic crisis) cannot lead to a decrease in what can be considered its 'highest possible ambition' compared to the level contained in the previous NDC. In order to avoid a stagnation or decrease in ambition level, the progression principle in Article 4.3 not only sets a 'floor' for the next NDC but requires each Party to go beyond each previous NDC, each time to the highest possible level of ambition.

The impact of this provision has been likened to the non-regression principle known in human rights law, which requires that norms or standards which have already been adopted by states cannot be revised if this implies backtracking on the standard of protection of collective or individual rights.[49] However, the principle of progression in the Paris Agreement is much stronger than that: it implies enhancing and increasing the level of ambition, not just keeping it at the same level!

In the Paris Agreement, it is the combination of the principles of highest possible ambition and progression that determines the strength of Parties' NDCs: 'highest possible ambition' is responsive to states' differing responsibilities, capabilities and circumstances while at the same time aiming to match ambition with the overall temperature aim, thereby combining effectiveness, fairness and 'progression' to ensure that Parties do not divert from earlier ambition levels, but continue to increase such levels for every successive NDC.

This legal standard needs to be applied when analysing whether a Party has acted in accordance with the Paris Agreement. If, for example, it can be shown that a Party has consistently increased its GHG emissions, or has an ambition level in its NDC which is too low in relation to the risk at stake and does not aim at reaching the temperature goals in Article 2.1(a) (that is, does not follow a trajectory to reach global net zero CO_2 emissions around 2050), in accordance with its responsibilities and capacities (and therefore does not amount to its highest possible ambition), this Party is not acting with due diligence. Also, a Party which has not successively increased its level of ambition expressed in its NDCs, or has not taken effective

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[48] 'Five UN Human Rights Treaty Bodies Issue a Joint Statement on Human Rights and Climate Change: Joint Statement on "Human Rights and Climate Change"' (*OHCHR*, 16 September 2019) <www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=24998&LangID=E> accessed 11 July 2020.

[49] Michel Prieur, 'The Principle of Non-regression' in Michael Faure (ed), *Elgar Encyclopedia of Environmental Law* (Edward Elgar Publishing 2018) ch 19; Michel Prieur, *El Nuevo Principio de no Regresión en Derecho Ambiental* (Editions Bruylant 2012); María Valeria Berros, 'Construyendo el Principio de no Regresión en el Derecho Argentino' (Abeledo Perrot, Jurisprudencia Argentina 2011).

domestic climate measures, including legislative, administrative or enforcement measures, to implement it, has not acted in conformity with – that is, has breached – its international (due diligence) obligation of conduct.[50]

Moreover, the Paris Agreement recognizes the importance of averting, minimizing and addressing loss and damage associated with climate change (Article 8). As mentioned above, Parties resorted to a multilateral means – the Warsaw International Mechanism for Loss and Damage (WIM) – as a cooperative and facilitative basis with respect to loss and damage associated with climate change. Moreover, paragraph 52 of Decisions 1/CP.21 seeks to exclude Article 8 as a basis for liability or compensation.

However, the legal relevance of the 'liability exclusion clause' contained in paragraph 51 of decision 1/CP.21 is unclear. In general, decisions of the governing bodies of multilateral agreements, such as the Conference of the Parties (COP) to the UNFCCC, are not *de lege* binding under international law on the Parties to the agreement concerned, as long as the Parties did not give a mandate in the agreement itself to the COP to adopt a legally binding rule.[51] The UNFCCC does not contain such a mandate with respect to liability exclusion. Paragraph 51 could therefore be considered to be of a political nature (which it also unquestionably is) but not to contain a legal provision, and can therefore not effectively exclude legal claims of liability and compensation under Article 8 of the Paris Agreement.

Another aspect to be considered here is the fact that decision 1/CP.21 was adopted by the COP to the UNFCCC. The Convention is an international treaty independent from the Paris Agreement. Its governing body, despite significant overlap in membership, is separate and independent from the governing body of the Paris Agreement, the CMA. As just mentioned, the COP cannot adopt legally binding rules – but, even more importantly, it cannot adopt rules that are legally binding on the Parties of *another*, independent international treaty. For the 'liability exclusion' in paragraph 51 of decision 1/CP.21 to have legal effect, it would have had to be included in the operational text of the Paris Agreement itself, or – at the very least – have been adopted by the CMA.

The question that follows is then whether Article 8 contains a legal obligation to avoid and address loss and damage associated with climate change, which when breached could be the basis of a compensation claim. The answer appears to be negative. While Parties recognize the importance of averting, minimizing and addressing climate change-related loss and damage, this recognition cannot be said to amount to a primary legal obligation to prevent such harm. As mentioned above, Parties agreed on collective, cooperative and facilitative means to address loss and damage. They were careful not to phrase the importance of addressing loss and damage in a 'litigable' manner, that is, as an individually legally binding 'shall' obligation. Still, Article 8 is subject to interpretation, and alternative views might exist.

However, even if Article 8 does not (seem to) provide a legal basis for a compensation claim, the Paris Agreement might still contain *other* articles that oblige Parties to prevent

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[50] A recent statement by five UN Treaty Bodies went so far as to suggest that 'In order for States to comply with their human rights obligations, and to realize the objectives of the Paris Agreement, they must adopt and implement policies aimed at reducing emissions, which reflect the highest possible ambition, foster climate resilience and ensure that public and private investments are consistent with a pathway towards low carbon emissions and climate resilient development': 'Five UN Human Rights Treaty Bodies Issue a Joint Statement on Human Rights and Climate Change' (n 48).

[51] Daniel Bodansky, *The Art and Craft of International Environmental Law* (Harvard University Press 2009).

dangerous climate change. Moreover, paragraph 51 in decision 1/CP.21 only seeks to exclude Article 8 as a basis for liability and compensation. It is silent on, and does not exclude, any other article of the Paris Agreement or any other international norm, expressed in treaty or customary law, as such basis.

4.2 Breach of an International Obligation: Customary International Law

4.2.1 Obligation

Under customary international law, states are under the obligation to not inflict damage on or violate the rights of other states. In environmental law, this obligation has been translated into the obligation to not cause harm to the environment of other states and to areas beyond any jurisdiction. The ICJ, in its 1996 Advisory Opinion in *Nuclear Weapons* and in *Gabcikovo-Nagymaros*, confirmed the 'general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment'.[52] The ICJ further elaborated on the no-harm rule in the *Pulp Mills* case, deciding that '[a] State is thus obligated to use all the means at its disposal in order to avoid activities which take place in its territory, or in any other area under its jurisdiction, causing significant damage to the environment of another State'.[53]

Still, a customary rule as a primary obligation has the disadvantage of vagueness. The court would be faced with difficult legal questions such as to the exact content of the rule and whether the rule relates to the harm caused, which means that transboundary harm as such is prohibited, or whether it relates to specific activities which would cause harm. In light of sparse use by international courts, the court would have to investigate the substantive content of the rule: whether it contains an obligation not to cause harm, to prevent foreseeable risk of damage and to minimize risk thereof,[54] and the obligation to compensate states that are directly or indirectly affected.[55]

Moreover, the no-harm rule has been restricted in scope. Not all types of damage must be prevented, but only significant[56] or even serious damage.[57] 'Significant' can be defined as

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[52] 'Legality of the Threat or Use of Nuclear Weapons' (Advisory Opinion, ICJ Reports 1996) 226, 242; 'Gabcikovo-Nagymaros Project (Hungary v Slovakia)' (ICJ Reports 1997) 7, 41.

[53] 'Pulp Mills on the River Uruguay' (n 38) para 101.

[54] Tullio Scovazzi, 'State Responsibility for Environmental Harm' (2001) 12(1) *Yearbook of International Environmental Law* 43, 49.

[55] 'The Factory at Chorzów (Claim for Indemnity) (The Merits) (Germany v Poland Judgment)' (Permanent Court of International Justice Rep Series A No 17) 30. This is also in line with Principle 22 of the Stockholm Declaration (United Nations, *Declaration of the United Nations Conference on the Human Environment* (Stockholm 1972)) and Principle 13 of the Rio Declaration (United Nations, *Report of the United Nations Conference on Environment and Development* (Annex I, Rio Declaration on Environment and Development 3–14 June 1992).

[56] United Nations, *Co-operation between States in the Field of Environment* (27th Session A/RES 2995 (XXVII) 15 December 1972) prohibiting 'significant harmful effects' on other states when states utilize their natural resources. The ILC defined the term 'significant damage' by stating that this should mean something more than detectable or appreciable, but not necessarily serious or substantial.

[57] 'Lac Lanoux Arbitration (France v Spain)' (1957) 24 *International Law Reports* 101; 'Trail Smelter Arbitration (United States v Canada)' (16 April 1938, 11 March 1941) 3 *Reports of International Arbitral Awards* 1905, 1907.

something more than detectable but not at the level of serious or substantial. There is no clarity as to the delineation of this threshold and the court's finding might help to elucidate this.

4.2.2 Standard of care: failing to act with due diligence

In order for international responsibility of a state to arise, legally relevant state behaviour needs to be identified. A state is obligated to use all the means at its disposal. In this regard, the concept of *due diligence* would be the standard of care to evaluate the conduct that is required of a state.[58] The term due diligence amounts to a framework concept which must be given legal meaning in the context of specific activities and risks. It has been described as the conduct that can be expected of a good government.[59] As already identified above, what constitutes the appropriate standard of care is thus determined by looking at a state's means and capacities at its disposal in an international context.[60]

The ILC in its commentary to the '2001 Articles on Prevention of Transboundary Harm From Hazardous Activities' noted that acting with due diligence requires a state 'to take unilateral measures to prevent significant transboundary harm or at any event minimise the risk thereof […] Such measures include, first, formulating policies designed to prevent significant transboundary harm or to minimise the risk thereof and, second implementing those policies.'[61]

The concept of due diligence is a means to identify the *duty of care* to be exercised in international affairs. The concept is relevant to different areas in international law (such as human rights law, humanitarian law, criminal law, environmental law), but some common basic features pertain across these different fields.[62] In some areas of international law, due diligence has become the *prevailing legal standard for assessing the adequacy of government action.* Due diligence can be seen as both a duty of and a constraint to state behaviour.

In international environmental law, in order to demonstrate that it has acted diligently, the state is expected to prevent foreseeable significant damage, or at least minimize the risk of such harm.[63]

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[58] This principle was applied in the Nauru case 'Certain Phosphate Lands in Nauru (Nauru v Australia) Preliminary Objections' (ICJ Reports 1992) 240.

[59] Verheyen (n 15) 174.

[60] Albrecht Randelzhofer and Christian Tomuschat (eds), *State Responsibility and the Individual* (Brill 1999) 280.

[61] International Law Commission, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with Commentaries 2001* (53rd session, United Nations 2001) Art 3(10).

[62] See for example, *International Covenant on Economic, Social and Cultural Rights* (16 December 1966, Entered into force 3 January 1976, 993 UNTS 3) Art 2(1); *Convention on the Elimination of All Forms of Discrimination Against Women* (18 December 1979, Entered into force 3 September 1981, 1249 UNTS 13) Art 5(a)–(b); *Optional Protocol to Convention on the Elimination of All Forms of Discrimination Against Women* (6 October 1999, Entered into force 22 December 2000, 2131 UNTS 83); *Convention on the Rights of the Child 1989* (7 March 1990, Entered into force 2 September 1990, 1577 UNTS 3) Art 2(1)–(2).

[63] International Law Commission, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with Commentaries 2001* (n 61) Art 3(1) 154. According to the Commentaries to Art 3(10), due diligence is 'manifested in reasonable efforts by a State to inform itself of factual and legal components that relate foreseeably to a contemplated procedure and to take appropriate measures in a timely fashion to address them. Thus, States are under an obligation to take unilateral measures to prevent significant transboundary harm, or at any event to minimize the risk thereof […]'.

In determining the duty of care and attuning it to states' specific circumstances with regard to the extent, scope and timeframe for preventing climate change damages, account needs to be taken of the following criteria:

(i) the nature and extent of potential damage (risk) ensuing from climate change;
(ii) the knowledge and foreseeability of harm;
(iii) the general opportunity to act to prevent such harm;
(iv) the nature of the acts (or omission) of states;
(v) the discretion of states to execute their sovereign power with due regard to the latest scientific knowledge, available technical options to take preventive measures ('special' possibility) and proportionality (that is, the measures must not be disproportionately burdensome, impossible or unfeasible).

As said above, in terms of preventing climate change damages, acting with due diligence requires that effective climate policies and respective regulations need to be in place, which aim to reach global net-zero CO_2 emissions around 2050, taking into account the need for some states to reach this target earlier.[64] Acting with due diligence imposes duties on states to effectively regulate private behaviour in accordance with such pathways, which is especially relevant in the case of climate change. In other words, it requires states to take appropriate measures to address private behaviour, including the regulatory aspects of adoption and implementation of laws and regulations, monitoring and their enforcement.[65]

The due diligence standard also varies in context on the basis of common but differentiated responsibilities and respective capabilities, in light of different national circumstances. It is well established that developing states may face challenges to control and regulate the activities in their territory in a similar manner to developed states, and that this will affect the evaluation of whether they have breached their due diligence obligation. It is understood that the degree of care expected of a state with a well-developed economy and human and material resources and with highly evolved systems and structures of government is different from states which are not so well placed.[66] However, the economic level of a state cannot be used to exempt the state entirely from its obligations to regulate activities by private actors. The ITLOS, in its *Seabed Mining Advisory Opinion*, observed that '[e]quality of treatment between developing and developed States is consistent with the need to prevent commercial enterprises based in developed States from setting up companies in developing States, acquiring their nationality and obtaining their sponsorship in the hope of being subjected to less burdensome regulations and controls'.[67]

These aspects of a due diligence standard also tie in with international procedural obligations of cooperation, notification and consultation. This understanding is in line with principles of good faith and good neighbourliness in international law.[68] While the due diligence

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[64] Voigt, 'Climate Change Damages and State Responsibility' (n 15).
[65] 'Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area' (n 38).
[66] 'Pulp Mills on the River Uruguay' (n 38) paras 12–13, pp 154–55, referring to Principle 11 of the Rio Declaration.
[67] 'Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area' (n 38) 159.
[68] Koivurova (n 45).

standard is not specific or precise, it is the conduct that can be expected of a good (functioning) government. It implies that every state ought to employ its highest level of ambition and act according to its best capabilities, or 'do as well as it can'. Every state is required to exert its *best possible efforts* and to take all appropriate measures to minimize the risk of, and prevent significant transboundary harm caused by, climate change. The standard of due care must be determined on a case-by-case basis with regard to a country's capacity to reduce its GHG emissions to the greatest extent possible under national circumstances. But, at the very least, each state needs to strive to contribute to reaching global net-zero CO_2 emissions by the middle of this century. As mentioned above, this standard of care is now also part of the normative content of the Paris Agreement (Article 4.3).

4.2.3 Causation

It is further necessary that there is a causal link between the activity and the damage occurring. It is useful here to distinguish between general causation and specific causation. The first type refers to a general link between increasing anthropogenic GHG emissions and climate change damages. This causation chain is not discussed here as almost universal international scientific consensus exists on these issues, as provided in the reports by the IPCC.

Specific causation requires proof that a specific activity causes a specific damage. The fact that the polluting activity was not prohibited domestically is irrelevant in this context as it is the causation of harm that it prohibited, not the polluting activity.[69] However, the impossibility to attribute emissions of a specific country to specific damages due to the complex and synergetic effect of the diverse pollutants and multiple polluters and the non-linearity of climate change could be problematic – but not unsurmountable. Several studies and data sets exist that attribute to states their historic and current emissions.[70] Such attribution could enable claims of responsibility for the attributable percentage of global emissions.[71]

Moreover, in *Trail Smelter* multiple causes did not deter the tribunal in its award of damages. Rather, the fact that the injury was at least partially caused by the polluting activity of the smelter in Trail, Canada, appeared to be sufficient. The question is whether legal theory is able to develop innovative theories that can deal with this kind of challenge or whether legal analysis necessarily stops at this point. One suggestion could be to establish causation on the sole basis of *contribution* to the problem of climate change from a specific state. The question of how much damage might have been caused by this contribution is irrelevant in this respect; it will, however, play a role in the stage of apportioning costs. It could also be argued that any

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[69] Patricia Birnie, Alan Boyle and Catherine Redgwell, *International Law and the Environment* (3rd edn, Oxford University Press 2009) 182.

[70] See, for example, 'Greenhouse Gas Emission Data' (*WRI*, April 2014) <www.wri.org/resources/data-sets/climate-watch-cait-country-greenhouse-gas-emissions-data> accessed 15 February 2021; 'ClimateWatch' (*Climate Watch*) <www.climatewatchdata.org> accessed 15 February 2021; 'Emissions Gap Report 2019' (UN Environmental Programme) <https://wedocs.unep.org/bitstream/handle/20.500.11822/30797/EGR2019.pdf?sequence=1&isAllowed=y> accessed 15 February 2021; 'Climate Action Tracker' (*Climate Action Tracker*) <https://climateactiontracker.org> accessed 15 February 2021.

[71] See also Chapter 20, Benjamin, which discusses litigation against high-emitting companies (the 'carbon majors'), where the studies by Richard Heede on climate attribution play a key role, enabling claims such as company X is responsible for Y per cent of global emissions since year z.

emission of GHGs has increased the risk of special damage by contributing to the increased concentrations of GHGs in the atmosphere.[72]

Still, in the absence of an agreed approach in international law on the determination of causation in fact, it is not clear how the court would deal with the issue of complex and cumulative causes. Most likely is recourse to principles found in domestic legal systems, but the ICJ could offer an important contribution to this legal debate.

5. LEGAL CONSEQUENCES

What are the legal consequences if a state were found to be responsible? First, the primary obligation to not cause transboundary harm persists (Article 29 ASR). Second, the state is obliged to cease the wrongful act (Article 30 ASR), that is, to regulate the effective reduction of GHG emissions. However, the reduction of GHG emissions or the restoration of sinks is not an exercise that can be accomplished in a short time. Here, the ASR do not provide enough flexibility on cessation, which is seen as an absolute obligation. Third, the state is obliged to make full reparation for any injury caused (Article 31 ASR).

The ASR envisage that reparation for the injury shall take the form of restitution, compensation and satisfaction (Articles 31–35). In cases involving climate change damages, it might in fact be physically impossible to restore the situation *ex ante*. A victim state will therefore be seeking financial compensation to cover the costs associated with material damage to environmental resources (pure environmental damage) and consequential damage to people and property (consequential environmental damage), including restoration.

In this context, particular challenges arise, such as: (i) assessment of environmental harm and (ii) contribution to the injury.

With regard to the assessment of environmental harm, Article 31 ASR is particularly relevant. It defines injury as 'including any damage whether material or moral' caused by the internationally wrongful act. Material damage includes all potential losses in infrastructure, property and other clearly defined economic assets, including 'costs incurred in responding to pollution damage', which – taken literally – means also any adaptation measure. In the context of climate change, material damages will be easier to define and to assess in financial terms than purely environmental or ecological damages.[73]

Ecological damage, such as the destruction of coral reefs or ecosystem changes or destruction of biological diversity, is much more difficult to quantify and to define.[74] Despite general acceptance of ecological damage in international law,[75] it remains somewhat unclear whether

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[72] See n 75 below; Verheyen (n 15); Voigt, 'Climate Change Damages and State Responsibility' (n 15) 1–22.

[73] Christina Voigt, 'Climate Change and Damages' in Cinnamon Carlane, Kevin Grey and Richard Tarasofsky (eds), *Oxford Handbook of International Climate Change Law* (Oxford University Press 2016) 464–94; Christina Voigt, 'International Environmental Responsibility and Liability' in Lavanya Rajamani and Jessica Peel (eds), *Oxford Handbook of International Environmental Law* (Oxford University Press 2021 forthcoming).

[74] Alan Bowman and Michael Boyle (eds), *Environmental Damage in International and Comparative Law: Problems of Definition and Valuation* (Oxford University Press 2002).

[75] Clear support for compensation for environmental damage was provided by the UN Security Council Resolution 687 in 1991 reaffirming that Iraq was 'liable under international law for any direct

such damage is capable of being measured by factual and objective standards.[76] In 2018 the ICJ decided an environmental compensation case which offered clear affirmation that environmental damage includes ecosystem services. In the *Costa Rica v Nicaragua/Nicaragua v Costa Rica* cases, the ICJ ordered Nicaragua to pay compensation to Costa Rica for environmental damage.[77] However, the ICJ did not indicate how it calculated the value of the impairment or losses to the environmental services provided. The ICJ's method of quantifying environmental damages was criticized as an '"incrementalist" approach to quantification […] a methodologically ambiguous and context-sensitive approach which is not easily replicable for future environmental cases, given the complex nature of environmental damages in any given dispute'.[78] Although the final compensation fell short of what Costa Rica had sought, the case is an important precedent in that the Court noted that 'damage to the environment, and the consequent impairment or loss of the ability of the environment to provide goods and services, is compensable under international law',[79] which may include indemnification for such impairment or loss or payment for restoration of the damaged environment.[80]

With regard to the contribution to the injury, Article 39 ASR is relevant: it requires that in situations where the claimant state has, through wilful or negligent behaviour or omission, contributed to the injury, the extent of the reparation must be adjusted accordingly. Contribution to the damage (by the fact that the claimant state also emitted GHGs) will therefore not lead to an exculpation of the wrongful act, but may limit accordingly the legal consequences flowing from it.

6. CONCLUSIONS

As climate change continues largely unmitigated, there is a high risk that damages associated with the impacts of climate change will only increase in number, magnitude and frequency. Against this background, establishing liability for those damages in order to seek compensation or other means of redress is a legitimate and just way to address the often unjust circumstances within which climate change-related damages occur. This applies in particular to harm caused to those states, communities or people that are most vulnerable and exposed to the impacts of climate change, while having contributed the least, if at all, to the problem of global warming.

This chapter attempted to chart the existing rules and provisions in international law to establish international responsibility for climate change-related damages. No treaty provision

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loss, damage, including environmental damage and the depletion of natural resources […] occurring as a result of its unlawful invasion and occupation of Kuwait'. United Nations Security Council, *Resolution 687 (1991)* (Adopted by the Security Council at its 2981st meeting, on 3 April 1991 S/RES/687).

[76] See Chapter 10, Payne.

[77] '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' (*ICJ*, 2018) <www.icj-cij.org/en/case/150> accessed 15 February 2021.

[78] Diane Desierto, 'Environmental Damages, Environmental Reparations, and the Right to a Healthy Environment: The ICJ Compensation Judgment in Costa Rica v. Nicaragua and the IACtHR Advisory Opinion on Marine Protection for the Greater Caribbean' *EJIL:Talk!* (14 February 2018).

[79] 'Certain Activities Carried Out by Nicaragua in the Border Area' (n 77).

[80] Nilufer Oral, 'The ICJ Renders Its First Environmental Compensation Decision: A Summary of the Judgment' (*IUCN*, 9 April 2018) <www.iucn.org/news/world-commission-environmental-law/201804/icj-renders-first-environmental-compensation-decision-summary-judgment> accessed on 3 March 2019.

seems to directly address state responsibility to avoid climate change damages as an obligation of result. However, treaty law, in particular the Paris Agreement, sets up the obligation of conduct to act with due diligence in setting the objectives in Parties' NDCs and to implement them. Parties are under the legal obligation to deploy their best efforts in taking all adequate, effective and necessary measures, commensurate to the risk at stake and their economic capacities. Taking inadequate or ineffective climate mitigation measures would amount to a breach of an international obligation.

A similar standard of care applies under customary international law and the obligation not to cause significant transboundary harm. Also here, all states are required to act with due diligence and to apply their best means to avoid climate change-related damages impacting other states' territories, as well as areas beyond national jurisdiction.

It can reasonably be expected of a good government that it will take all appropriate and necessary measures to mitigate climate change compared to a government in a similar situation. This includes addressing private behaviour, adopting necessary regulatory measures, implementing and monitoring these measures, and effectively enforcing them. In sum, states need to set their highest possible mitigation target at a level that is not economically disproportionately burdensome or impossible to achieve, and to have domestic measures in place that are necessary, meaningful and, indeed, effective means to achieve that target.

The concrete content of the due diligence obligation of conduct still awaits refinement and specification and will differ from circumstance to circumstance, and from case to case. Legal research and analysis, as well as an increasing amount of judicial practice on this matter, will play a key role in carving out the contours of this duty. However, if it can be shown that a state has not acted diligently (that is, has not done as well as it can) in addressing the risk of climate change and the damages associated with it, this omission could give rise to state responsibility and its legal consequences, including a right to compensation to cover the costs associated with climate change damages.

Annex 537

M. Wewerinke-Singh & C. Doebbler, "Protecting Human Health from Climate Change: Legal Obligations and Avenues of Redress under International Law", *International Journal of Environmental Research and Public Health*, 2022, pp. 1-13, pages 1-5

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Protecting Human Health from Climate Change: Legal Obligations and Avenues of Redress under International Law

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Abstract: In this contribution, we explore how human health can be protected from climate change and its adverse effects by reliance on States' obligations under international law. We achieved this by reviewing the principal legal instruments that establish the right to health, as well as those that recognize that climate change has an adverse impact on health (Part II). We then examine the means of redress that may be available to those whose human right to health has been interfered with or violated because of climate change (Part III). Finally, we draw some conclusions as to the current effectiveness and future direction of these developments.

Keywords: climate change; public health; human rights; redress; right to health

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1. Introduction

Climate change has been characterized as one of the defining challenges of our time [1]. The Nobel-Prize-winning Intergovernmental Panel on Climate Change (IPCC) has stated unequivocally in numerous reports that greenhouse gas-emitting human activities are causing global warming and associated damage to natural and human systems [2]. The Earth has now warmed by about 1.2 °C since pre-industrialization, and this poses increasingly severe threats to human health [3].

In this contribution, we explore how human health can be protected from climate change and its adverse effects by reliance on States' obligations under international law. We achieve this by reviewing the principal legal instruments that establish the right to health, as well as those that recognize that climate change has an adverse impact on health (Part II). We then examine the means of redress that may be available to those whose human right to health has been interfered with or violated because of climate change (Part III). Finally, we draw some conclusions as to the current effectiveness and future direction of these developments.

Our contribution draws on the policy-oriented approach to international law and its general framework of enquiry into community values expressed primarily through the legal undertakings of States. We recognize that international law is part of a process whereby States strive to achieve values postulated in the international instruments [4]. We recognize the normative value of international law as both evidence of the value choices of States and as commitments by States that empower individuals and groups to make claims on States. Insofar as some States' understanding of international law may differ from that which we suggest, we seek to rely on the expressions of States in their international instruments and understand them to have been made in good faith.

2. The Right to Health and the Climate Crisis

International climate change law and international human rights law both contain several widely ratified treaties that provide legal obligations for States in relation to both climate change and the right to health.

The relationship between climate change and health is recognized expressly in the United Nations Framework Convention on Climate Change (UNFCCC) [5]. This treaty refers to health in the first paragraph of its first article, stating that the adverse effects of climate change include its deleterious effects on "human health", among other things [5]. The right to health is also mentioned specifically in the 2015 Paris Agreement [6]. Furthermore, in their national communications under the UNFCCC, States have recognized that climate change can adversely affect human health and that the state of the environment has a direct impact on human wellbeing [7]. For example, Samoa noted in its National Communication that non-physical health problems, i.e., psychological or emotional stress, "can frequently result from extreme weather events, particularly in instances where there is bereavement and damage to property and livelihood [8]". Similarly, in their Nationally Determined Contributions (NDCs) under the Paris Agreement, about half of the States indicated that the physical and/or mental health of their people would be adversely impacted by climate change [9].

The relationship between the right to health and climate change has received increasing attention in recent years. Both in literature and in practice, it is recognized that climate change affects the right to health [10,11]. These impacts "stem from the immediate physical effects of climate change and the more gradual effects on the environment, human systems and infrastructure [12]". The impacts of climate change on the right to health may occur "through both its direct impact and its impact on social support systems and cultural traditions [12]". Moreover, these impacts may occur due to the adverse effects of climate change, as well as the adverse effect of ill-conceived measures to combat climate change or adapt to its effects [3].

In December 2019, five UN human rights treaty bodies [13] issued a Joint Statement on the IPCC's Special Report on Global Warming of 1.5 °C, noting that the Report "confirms that climate change poses significant risks to the enjoyment of the human rights . . . [and that] . . . [t]he adverse impacts identified in the report, threaten, among others, the right to life, the right to adequate food, the right to adequate housing, the right to health, the right to water and cultural rights [14]". The Joint Statement further notes that "[t]he risk of harm is particularly high for those segments of the population already marginalized or in vulnerable situations or that, due to discrimination and pre-existing inequalities, have limited access to decision-making or resources, such as women, children, persons with disabilities, indigenous peoples and persons living in rural areas [14]". It also notes that "[c]hildren are particularly at heightened risk of harm to their health, due to the immaturity of their body systems [14]". It concludes that

> "State parties have obligations, including extra-territorial obligations, to respect, protect and fulfil all human rights of all peoples . . . [and that their] . . . [f]ailure to take measures to prevent foreseeable human rights harm caused by climate change, or to regulate activities contributing to such harm, could constitute a violation of States' human rights obligations". [14]

While the human rights practitioners have often trifurcated the obligations to "respect, protect and fulfil [15]", in practice this distinction may have limitations [16] and, in any event, all three are part of a State's responsibility to abide by its international legal obligations [6,17]. Thus, in the below discussion of States' legal obligations and examples of policies and practices, we rely on a holistic understanding of States' international legal obligations.

2.1. The Right to Health

The right to health is firmly established in international law [18–31]. It has generally been defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity . . . [and] . . . [t]he enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being . . . " [18–31]. A more specific definition of the right to health in Article 12(1) of the International Covenant of Economic, Social, and Cultural Rights (ICESCR) defines it as "the right of everyone to the enjoyment of the highest attainable standard of physical and mental health", and

paragraph 2 sets out a number of "steps to be taken by the State parties [. . .] to achieve the full realisation of this right [18–31]".

The Committee on Economic, Social and Cultural Rights (CESCR) points out that "the right to health embraces a wide range of socio-economic factors that promote conditions in which people can lead a healthy life, and extends to the underlying determinants of health, such as food and nutrition, housing, access to safe and potable water and adequate sanitation, safe and healthy working conditions, and a healthy environment [15]". The CESCR also points out that "the right to health includes certain components which are legally enforceable [15]". Thus, while the ICESCR provides for the progressive realization of the right to health, it also imposes obligations that are of immediate effect [32], such as the "obligation to move as expeditiously and effectively as possible towards the full realisation of Article 12 [15]". These statements of legal obligation unequivocally evidence the intention of States to protect human health, including from climate change.

2.2. States' Obligations to Protect the Right to Health in the Context of Climate Change

In both climate change and human rights forums, States have recognized that they have the obligation "to undertake measures to mitigate climate change and prevent its negative impacts on human rights; to ensure all persons have the capacity and means to adapt; and to ensure accountability and an effective remedy for harms caused by climate change [6,33]", especially harm to human health. Both human rights [33,34] and climate change [33,35] law also require preventive action by States to prevent or mitigate harm. These obligations include duties to provide adequate financing for climate action in developing states [5] and obligations arising from the precautionary principle to prevent loss and damage [5,34].

The UNFCCC requires all Parties, in accordance with their common, but differentiated, responsibilities and respective capabilities, to formulate and implement programs containing measures to mitigate the consequences of climate change. Mitigation measures can contribute to the reduction of vulnerabilities and risks, and decrease the likelihood of adverse health impacts [5]. The Paris Agreement adds to this framework a long-term temperature goal of keeping global warming "well below" 2 C above pre-industrial levels, and pursuing efforts to keep it below 1.5 C [6]. All parties are obliged to pursue domestic mitigation measures, with the aim of achieving the objective of their NDCs [6]. These efforts must be undertaken in accordance with the principles of progression and the highest possible ambition [6], while developed States remain bound by their obligations to provide financial resources to assist developing States with respect to both mitigation and adaptation [6]. States are obliged to undertake these legal obligations in good faith [36–39].

The UNFCCC also calls on all States to employ appropriate methods, such as impact assessments aimed at minimizing the adverse effects of measures taken to respond to climate change on, amongst other things, public health [5]. This entails measures to foster sustainable economic development at the local and regional levels [40], which increase, rather than undermine, the resilience and adaptive capacity of persons and groups of persons at risk of suffering adverse effects on health. Substantively, such responses may involve investing in measures that improve housing, livelihood diversification, education, food security, and health care [41], as well as establishing social protection, such as safety net schemes [42].

As noted above, mitigation and adaptation measures must be supported by climate financing. 'Climate finance' refers to local, national, or transnational financing that seeks to support mitigation and adaptation actions that will address climate change [43]. On 28 March 2022, at a preparatory meeting for the 50-year anniversary of the UN Conference on the Human Environment, the G77 + China focused their attention on financing for addressing climate change, stating that it must be a priority for any future development agenda [44]. This concern is consistent with the principle of "common but differentiated responsibilities and respective capabilities"; the UNFCCC obliges developed States to provide financial resources to assist developing States parties in implementing its objectives [43]. Moreover, the UNFCCC formulates a distinct obligation for developed States to

assist developing States that are particularly vulnerable to the adverse effects of climate change, including effects on human health [5], in meeting costs of adaptation to those effects [5]. In line with these obligations, developed States must provide climate finance through a variety of actions, including supporting country-driven strategies, and taking into account the needs and priorities of developing States [44].

The right to health requires developed States to consider the specific needs of developing States related to public health, and to assist developing States in addressing those needs. Considering that the negative impacts of climate change are "disproportionately felt by [persons] in vulnerable situations, particularly those living in geographically vulnerable developing countries [12]", scaled-up assistance must be provided, particularly to the populations of these States that are at the greatest risk of suffering adverse health impacts.

In situations where loss and damage cannot be prevented, international cooperation and assistance are especially critical in protecting the right to health. The obligation of international cooperation to realize the right to health is recognized in international treaties and reinforced by the commitment to a global partnership for sustainable development in Sustainable Development Goal (SDG) 17 [45]. According to the former UN Special Rapporteur on the Right of Everyone to the Enjoyment of Physical and Mental Health, Paul Hunt, "[i]n practice, the realization of the right to the highest attainable standard of health is dependent upon international assistance and cooperation [46]". All States have obligations to cooperate with each other to realize the right to health based on customary international law, the UN Charter [47], and human rights treaties [18–32]. Developed States in particular must assist developing States to "take the lead in combatting climate change and the adverse effects thereof" in accordance with the principle of common but differentiated responsibilities [5]. This cooperation is especially important for developing States that are more vulnerable [12] and face significantly higher risks from climate change [10,11].

3. Accountability and Reparations

International law provides that, when a State is injured, it is entitled to compensation [48–50]. A corresponding right is recognized by international human rights instruments [51–53] and tribunals. The successive UN mandate-holders have agreed that "[u]nder international human rights law, there is a solid legal framework establishing the right of victims to reparation for gross human rights violations [54]".

3.1. United Nations Climate Change Forums for Seeking Redress for Interference with the Right to Health Caused by Man-Made Climate Change

Although the UNFCCC contains provisions for resolving disputes that could be used to hold States accountable for actions inconsistent with the treaty, these provisions have not been used [5]. Moreover, there was initially no dedicated mechanism to redress the harm caused by climate change under the UNFCCC. This changed with the consideration of "loss and damage" in negotiations at the urging of Small Island States. Vanuatu, on behalf of the Alliance of Small Island States, submitted a proposal for an insurance mechanism to facilitate compensation for States affected by climate change, particularly sea-level rise [55,56]. While this proposal was not clearly included in the UNFCCC [5,57], advocacy for the establishment of a compensation and rehabilitation fund continued [58,59]. It ultimately culminated in the establishment of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM) at COP19 held in Warsaw, Poland, in 2013 [60]. The WIM is mandated to prevent, minimize, and address loss and damage in developing countries that are particularly vulnerable to the adverse effects of climate change.

By considering loss and damage, States intended to include in negotiations the adverse effects of climate change that have not been prevented by mitigation or adaptation [61–64]. In other words, to include all unavoidable, as well as unavoided, harm resulting from climate change [65]. The term also includes the harm caused by climate change adaptation, i.e., expenses and unintended consequences, as well as non-monetary or non-economic losses to include loss of livelihood, loss of biodiversity, and loss of human health [66].

The UNFCCC Secretariat has recognized that "[h]uman health incorporates physical, mental and social well-being, and its non-economic value stems from its contribution to well-being [66]".

The WIM tries to address loss and damage by increasing the knowledge and understanding of comprehensive risk management approaches to address loss and damage associated with the adverse effects of climate change, including slow onset impacts; strengthening dialogue, coordination, coherence, and synergies among relevant stakeholders; and by enhancing action and support, including finance, technology, and capacity-building to address the loss and damage associated with the adverse effects of climate change [61–64]. The WIM also assesses the risk of loss and damage associated with the adverse effects of climate change involving vulnerable communities and populations in its assessment [67]. Finally, another function of the WIM is to increase action and support, including finance, technology, and capacity-building to address the loss and damage associated with the adverse effects of climate change.

Action and support enabled or provided through the WIM have the potential to address a range of threats to the right to health, such as preventing irreversible losses of ecosystems that sustain communities, strengthening the capacity of developing States to provide financial and other forms of assistance to those impacted by climate change, and to develop and implement strategies to end current and prevent future harm. However, as noted above, loss and damage are already occurring at a scale bound to increase as temperatures continue to rise. Whether the belatedly started WIM can actually prevent or reduce the impact of climate change on the right to health is still to be seen.

In 2015, Article 8 of the Paris Agreement to the UNFCCC brought loss and damage unambiguously under the UNFCCC umbrella of concern [6]. At COP25 in Madrid, Spain, the Santiago Network on Loss and Damage was established and this year at COP26, the Santiago Network was operationalized and received several pledges of funding. While the Santiago Network aims to help persons who have suffered harm from climate change, it is not intended to provide redress for damage or accountability. Its assistance is more of an advisory and voluntary nature. It will likely function as an incubator that brings donors and implementing partners together and disseminates research. What it adds to existing bodies, such as the WIM, is yet to be seen.

3.2. United Nations Human Rights Forums for Seeking Redress for Interference with the Right to Health Caused by Man-Made Climate Change

Academics have suggested that States should ensure "effective remedies in administrative or judicial proceedings for climate harm or the threat or risk of such harm, including modes of compensation, monetary or otherwise [68]". Indeed, States are obliged to ensure access to effective remedies for violations of the right to health, including those occurring in connection with climate change [33,51–53,69].

The law on remedies for human rights violations reflects the general law on State responsibility [70]. As internationally wrongful acts, human rights violations trigger the distinct obligation for the responsible State to make full reparation for the injury caused by the wrongful act [70,71]. Reparation can be made through restitution, compensation, satisfaction, or a combination of these [71]. Each of these remedies is aimed at making the victim 'whole' [72] and denouncing the wrong that interfered with her or his rights.

Restitution is the primary remedy for human rights violations, as it is for other violations of international law [71], and involves "the restoration of the prior situation, reparations of the consequences of the violation, and indemnification for patrimonial and non-patrimonial damages" [73]. For violations of the right to health, the victim of the violation will usually be in the best position to identify ways in which their health may be restored to the greatest possible extent. Listening to victims and inquiring into their actual needs is, therefore, an indispensable element of providing redress for violations of the right to health, including violations related to climate change.

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M. Fitzmaurice, et al., *International Environmental Law, Text, Cases and Materials* (Edward Elgar Publishing Limited, 2022), pages 424-427

INTERNATIONAL ENVIRONMENTAL LAW

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INTERNATIONAL ENVIRONMENTAL LAW

TEXT, CASES AND MATERIALS

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17
Responsibility and liability for environmental damage

17.1 INTRODUCTION

A usual consequence of the 'no harm' principle[1] is for the harm to be repaired. This is, as Alena Douhan observes, not a new phenomenon, and the principle of compensation for damage resulting from environmentally harmful activities is well established.[2] Principle 22 of the 1972 Stockholm Declaration states:

> States shall cooperate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.

Similarly, Principle 13 of the 1992 Rio Declaration states:

> States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

The implementation, however, of a regime for reparation of environmental harm can be complex. Environmental harm may involve a large amount of damage affecting a variety of entities, potentially involving very large sums in compensation and a large number of claimants, both individuals and States. The harm may be hard to quantify, especially since the effects of the damage may continue for a long period of time. Within the sphere of traditional inter-state relations, it is hard to regulate because the cause of the harm will very often be private actors. Moreover, the cause of the harm may well be accidental, or involve no obvious breach of any particular obligation. In this connection, it is worth noting that many obligations

[1] See Chapter 4.

[2] Alena Douhan, 'Liability for Environmental Damage' in R Wolfrum, *Max Planck Encyclopedia of Public International Law* (2019).

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to prevent, e.g., in the protection of the marine environment, were concluded only *after* the occurrence of a major environmental incident had highlighted the regulatory gap that needed to be addressed.[3] Furthermore, various actors may bear some causal responsibility,[4] while problems of causation can be highly technical and difficult to establish.

The approach to reparations taken under general international law in the inter-state context exists under the rubric of international responsibility. This is authoritatively contained in the ILC's 2001 Articles on Responsibility of State for International Wrongful Acts. Reparation under state responsibility arises as a consequence of the breach of an international obligation – it requires the state seeking reparations to establish that another state injured them. This approach may be contrasted with a liability model of reparation, in which an entity is strictly liable to compensate for environmental damage arising from an incident, irrespective of whether the operator's conduct breached any relevant legal norms. This model of compensation is found, primarily, in national legal systems and in international regimes for the establishment of civil liability (i.e., for the liability of private actors) in respect of environmental harm. Inter-state liability regimes can, however, be found, exceptionally, in the 1972 Space Liability Convention. A proposal by the ILC in its 1996 draft Articles on International Liability that state liability should operate such that they should be liable for all transboundary harm was not included in the final 2006 Draft Principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities.

When it comes to the legal implementation of any regime for environmental damage, a preliminary and difficult question is what constitutes compensable damage? The particular development of note, here, is the recognition of compensation for pure environmental damage. Traditionally, damage was understood to refer to damage to people or property rather than the environment *per se*. Insofar as damage to the environment was compensable, the ground for compensation was the cost incurred in preventing or responding to the harm. This is reflected in several of the current civil liability regimes that do not provide for pure environmental harm as a head of compensable damage. Many instruments have now recognised a head of pure environmental damage, in which impairment of the environment is itself compensable. Nonetheless the scope of pure environmental damage varies according to the definition employed by each particular regime.

A second issue that arises from the attempt at defining compensable damage is whether damage is equivalent to harm or impairment or whether a further threshold of severity must be met before such harm rises to 'damage'. The general position is that a minimum threshold must be met for impairment to constitute damage, but there is a degree of vagueness about where the line is drawn. According to the ILC in the commentary to the 2006 Draft Principles on the allocation of loss in the case of transboundary harm arising out of hazardous activi-

[3] See Chapter 8 on protection of marine environment.

[4] See e.g. report into *Deepwater Horizon*: National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, 'Report to the President: Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling' (2011) https://www.govinfo.gov/content/pkg/GPO-OILCOMMISSION/pdf/GPO-OILCOMMISSION.pdf accessed 4 June 2021.

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ties, the harm must be 'significant'. This does not, however, mean that the harm must reach a degree of severity, but instead must be real, in the sense of measurable by objective standards. Other instruments provide for a stricter gravity threshold, such as that the impairment must be above a minimum level or be long term or irreparable.

Two related matters arise in connection with the problem of defining damage: the standard of liability and reparation. Under general international law, state responsibility for environmental harm is fault-based and operates on the principle of full reparation. The standard of fault within environmental law is typically that of due diligence. In international liability regimes, strict liability tends to apply and liability tends to be limited to a specified amount. One particular difficulty arising in the inter-state context is whether environmental norms incumbent on states give rise to any duty of reparation at all. In *Pulp Mills*, the ICJ held that breaches of procedural obligations – such as duties to consult – did not, in themselves, give rise to international responsibility to make reparation. The difficulty for inter-state responsibility that this line of reasoning creates is that many environmental obligations are of this form and would thus not be compensable in practice. Under general international law, however, if a compensable norm is breached, it is clear from *Costa Rica v. Nicaragua* that full reparation is required, and in valuing the amount of compensation, an amount approximately reflecting the value of the damage is possible even if the actual value is not clear.

The responsibility and liability of states for environmental damage is determined largely under the customary international law rules on state responsibility contained within the 2001 ARSIWA. The 1972 Space Liability Convention provides an example of an inter-state liability regime, but it is almost unique in this regard. Where international agreements do refer specifically to reparative obligations, this is done by reference to general custom. A novel approach can be found in the climate change regime, under the Warsaw international mechanism for loss and damage supported by a provision on loss and damage in the 2015 Paris Agreement. The Warsaw International Mechanism and Paris Agreement are not concerned with the allocation of liability to individual states, and it was made clear at the decision of the Conference of the Parties when adopting the Paris Agreement that 'Article 8 of the Agreement does not involve or provide a basis for any liability or compensation'.[5] Instead, the approach taken towards loss and damage is collective and involves coordinating responses, mitigation and adaptation, including the power to address loss and damage, including to the financial mechanism of the Convention.[6]

Civil liability regimes established under international treaties provide for specific liability regimes for certain entities in respect of certain types of environmental harm.[7] For example, the 1963 Vienna Convention on Civil Liability for Nuclear Damage makes the operator of a nuclear installation strictly liable for nuclear damage caused by a nuclear incident. Other treaties create liability for damage arising from oil pollution, hazardous waste, or the carriage

[5] Decision 1/Cp.21, para. 52.

[6] See discussion in Morten Broberg, 'State of Climate Law' The Third Pillar of International Climate Change Law: Explaining "Loss and Damage" after the Paris Agreement' (2020) 10 Climate Law 211.

[7] See P Sands and J Peel, *Principles of International Environmental Law* (4th edn, CUP 2018) 771–803.

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of dangerous goods. The treaties oblige states to impose the regime within their domestic legal system and allocates jurisdiction between the domestic courts of the Parties for adjudicating claims. The treaties tend to have two main dimensions. First, they establish liability, the scope of any exceptions to the liability, and limits to liability. Second, they prescribe that in the event of a specified incident or event, the relevant entity must ensure the availability of a fund up to a certain amount in order to meet claims for compensation for damage. This can also require mandatory insurance. International treaties also establish funds, such as the International Oil Pollution Compensation Fund 1992, which operators are required to contribute to in order to meet claims exceeding the maximum limit of compensation by the liable entity. These features of the regime, liability and financial security, can be distributed across different instruments. For instance, the current regime for civil liability for oil pollution is to be found in the 1992 Civil Liability Convention and the 1992 Fund Convention, each addressing one feature of the regime. In addition, excess claims may be required to be met by state parties themselves.

The chapter is structured as follows: first, it covers certain fundamental, general problems concerning responsibility and liability for environmental damage. Second, it examines responsibility and liability between states, specifically under the general regime for state responsibility and specific treaty regimes. Third, it examines the regimes for civil liability, with a particular focus on liabilities in respect of damage from oil, nuclear material and hazardous waste. These are selected because they are well-established, detailed regimes, indicative of the general approach towards civil liability found also in other conventions.

17.2 GENERAL ISSUES

17.2.1 Responsibility vs Liability

Institut de Droit International, 'Responsibility and Liability under International Law for Environmental Damage' (Strasbourg, 1997)

Basic Distinction on Responsibility and Liability

Article 1

The breach of an obligation of environmental protection established under international law engages responsibility of the State (international responsibility), entailing as a consequence the obligation to reestablish the original position or to pay compensation.

The latter obligation may also arise from a rule of international law providing for strict responsibility on the basis of harm or injury alone, particularly in case of ultra-hazardous activities (responsibility for harm alone).

Civil liability of operators can be engaged under domestic law or the governing rules of international law regardless of the lawfulness of the activity concerned if it results in environmental damage.

The foregoing is without prejudice to the question of criminal responsibility of natural or juridical persons.

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Annex 539

B. Mayer, *International Law Obligations on Climate Change Mitigation* (Oxford University Press, 2022), pages 1-29

OXFORD

INTERNATIONAL LAW OBLIGATIONS ON CLIMATE CHANGE MITIGATION

Benoit Mayer

OXFORD MONOGRAPHS IN INTERNATIONAL LAW

I
Introduction

A. Climate Change

Since the Industrial Revolution, societies have emitted increasingly large quantities of greenhouse gases (GHGs) into the atmosphere. These anthropogenic GHG emissions consist mainly in carbon dioxide, methane, nitrous oxide, and various halogen compounds.[1] They result from the combustion of fossil fuels for energy production and various other industrial and agricultural processes as well as land-use change (eg deforestation) and the degradation of organic waste.[2]

GHGs naturally present in the atmosphere reflect infrared radiation emitted by the Earth's surface, thus, in effect, 'trapping' heat within the Earth's atmosphere—a phenomenon often dubbed as the 'greenhouse effect'.[3] Over time, anthropogenic emissions have caused a significant increase in GHG concentrations in the atmosphere, thus enhancing the greenhouse effect and warming the climate system.[4] The Intergovernmental Panel on Climate Change (IPCC)—a UN body in charge of assessing the science related to climate change[5]—ascertained that '[i]t is unequivocal that human influence has warmed the atmosphere, ocean and land'.[6] The IPCC further noted that '[g]lobal surface temperature will continue to increase until at least the mid-century under all emissions scenarios considered'.[7] These scientific observations are beyond reasonable argument and they have long been acknowledged by states.[8]

[1] Marc Fleurbaey and others, 'Sustainable Development and Equity' in Ottmar Edenhofer and others (eds), *Climate Change 2014: Mitigation of Climate Change: Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (CUP 2014) 354. Relevant halogen compounds include chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs), halons, methyl chloride, methyl bromide, and nitrogen trifluoride. For a complete list, see Chris Smith and others, 'The Earth's Energy Budget, Climate Feedbacks, and Climate Sensitivity' in Valérie Masson-Delmotte and others (eds), *Climate Change 2021: The Physical Science Basis. Contribution of the Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (accepted version subject to final editing, IPCC 2021) table 7.SM.7.

[2] Gabriel Blanco and others, 'Drivers, Trends and Mitigation' in Edenhofer and others (eds) (n 1) 360.

[3] JB Robin Matthews and others, 'Glossary' in Masson-Delmotte and others (eds), *Climate Change 2021* (n 1) Annex VII, defining 'Greenhouse effect'.

[4] Richard P Allan and others, 'Summary for Policymakers' in Masson-Delmotte and others (eds), *Climate Change 2021* (n 1) §A.1.1.

[5] See UNGA Res 43/53 (6 December 1988) ¶5.

[6] Allan and others (n 4) §A.1.

[7] Ibid §B.1.

[8] See eg United Nations Framework Convention on Climate Change (9 May 1992, in force 21 March 1994) 1771 UNTS 107, Preamble ¶3.

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Climate change has disastrous environmental and social consequences, some of which will not fully unfold for centuries or millennia.[9] The IPCC concluded that climate change is already causing 'impacts on natural and human systems on all continents and across the oceans',[10] and it further highlighted that continued GHG emissions would 'increas[e] the likelihood of severe, pervasive and irreversible impacts'.[11] Climate change affects various physical systems, resulting in particular in sea-level rise (caused by the thermal expansion of seawater and increasingly by the melting of land-borne icesheets and glaciers), the acidification of seawater (from absorption of carbon dioxide), changes in precipitation patterns, and more extreme weather events.[12] These physical effects are taking a heavy toll on species and ecosystems[13] and, in turn, on societies, affecting sources of livelihoods, food security, and human health, while also exacerbating conflicts and forced migration.[14] Risks are particularly acute for communities living in low-lying coastal areas, small islands, or arid and flood-prone regions, especially in developing countries that have a limited ability to cope with climate impacts.[15] States have long acknowledged these scientific findings about the adverse impacts of climate change; they characterized climate change as 'a common concern of humankind',[16] 'an urgent and potentially irreversible threat to human societies and the planet',[17] and 'one of the greatest challenges of our time'.[18]

There are two main types of human intervention aimed at addressing climate change. First, climate change *mitigation* aims to address the cause of climate change by limiting and reducing GHG emissions by sources (eg the combustion of fossil fuel) and by enhancing the removal of GHGs by sinks (eg reforestation) and their storage by reservoirs.[19] Second, *adaptation* to climate change seeks to facilitate adjustments to climate change in order to manage, as far as possible, its

[9] See Stefan Dullinger and others, 'Extinction Debt of High-Mountain Plants under Twenty-First-Century Climate Change' (2012) 2 Nature Climate Change 619; Peter U Clark and others, 'Consequences of Twenty-First-Century Policy for Multi-Millennial Climate and Sea-Level Change' (2016) 6 Nature Climate Change 360.

[10] Christopher B Field and others, 'Summary for Policymakers' in Christopher B Field and others (eds), *Climate Change 2014: Impacts, Adaptation, and Vulnerability: Part A: Global and Sectoral Aspects: Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (CUP 2014) 4.

[11] Ibid 14.

[12] Ibid 11.

[13] Ibid 13 et passim.

[14] Ibid 17–20 et passim.

[15] Ibid 21–25 et passim.

[16] UNFCCC (n 8) Preamble ¶2; Paris Agreement (12 December 2015, in force 4 November 2016) (2016) 55 ILM 740, Preamble ¶8.

[17] Paris Agreement (n 16) Preamble ¶6.

[18] Transforming Our World: The 2030 Agenda for Sustainable Development, UNGA Res 70/1 (25 September 2015) ¶14. See also Political Declaration of the High-Level Political Forum on Sustainable Development Convened under the Auspices of the General Assembly, UNGA Resolutions 74/4 (15 October 2019) ¶11; 75/217 (21 December 2020) ¶1.

[19] For convenience, this book considers sinks as 'negative emissions' and uses the word 'emissions' to refer to emissions net of removals.

social and ecological consequences[20]—for instance, through disaster risk management, investments in freshwater or flood-prevention infrastructure, or even population migration and resettlement programmes. Mitigation and adaptation are not alternative but complementary objectives: even the most drastic mitigation action will not immediately stop the adverse impacts of climate change,[21] while adaptation alone will become increasingly challenging if GHG emissions continue unabated.[22] The focus of this book is on the mitigation of climate change and, more specifically, on international law obligations in this regard.

B. The International Law on Climate Change Mitigation

Law can help mitigate climate change in various ways. On the one hand, pre-existing rules of a general ambit may be applied so as to require climate action. Thus, on the domestic plane, the US Supreme Court interpreted the Environmental Protection Agency's statutory obligation to regulate 'air pollution' as extending to GHG emissions.[23] On the other hand, new rules can also be adopted specifically to foster climate action.[24] With regard to climate change mitigation, states, subnational governments, and regional organizations have introduced cap-and-trade mechanisms[25] and taxes,[26] along with technical regulations[27] and decision-making procedures,[28] aimed at limiting and reducing GHG emissions.

Yet, domestic law alone is unlikely to prompt effective action on climate change mitigation. Climate change is a global phenomenon: the sources of GHG emissions are scattered across countries[29] and, as GHGs rapidly mix in the atmosphere,

[20] See generally Core Writing Team and others (eds), *Climate Change 2014: Synthesis Report: Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC 2015) 118, 125.

[21] Field and others (n 10) 14.

[22] Richard JT Klein and others, 'Adaptation Opportunities, Constraints, and Limits' in Field and others (eds) (n 10) 902–03. See generally UNFCCC (n 8) art 4(1)(b).

[23] *Massachusetts v Environmental Protection Agency* (2007) 549 US 497.

[24] See generally the database 'Climate Change Law of the World', developed by the Grantham Research Institute on Climate Change and the Environment and the Sabin Center for Climate Change Law <https://climate-laws.org/>.

[25] See in particular Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC [2003] OJ L275/32.

[26] See eg Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity [2003] OJ L283/51, amended; Greenhouse Gas Pollution Pricing Act, SC 2018 (Canada), c12; Singapore, Carbon Pricing Act, 2018 No 26.

[27] See eg Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO_2 emissions from light-duty vehicles [2009] OJ L140/1; Executive Order 14037 of 5 August 2021, Strengthening American Leadership in Clean Cars and Trucks, 86 FR 43583.

[28] See generally Benoit Mayer, 'Climate Assessment as an Emerging Obligation under Customary International Law' (2019) 68 ICLQ 271.

[29] China, currently the largest country per GHG emissions, was only responsible for about one-quarter of global GHG emissions in 2018 (24 per cent of emissions including LULUCF, 26 per cent

any country is affected by any other country's GHG emissions.[30] Mitigating climate change thus requires coordinated efforts by every significant emitter to regulate the emissions that take place within its jurisdiction. This cooperation is unlikely to take place spontaneously as long as each state, prioritizing national interests, discounts the global benefits of reducing GHG emissions within its territory. While cooperation on climate change mitigation is in states' common interest, it is in each state's individual interest to try to free-ride on the efforts of others.[31]

In principle, this collective action problem could be solved with the adoption of international rules requiring states to cooperate in their common interest. Yet, defining the modalities of international mitigation action has revealed one of the most daunting tasks of international governance to date. A patent difficulty is the sheer cost of what is required[32]—nothing short of 'deep emissions reductions in all sectors'[33] and 'a transformation of the global economy'.[34] Another difficulty relates to the absence of any simple, objective way of splitting this cost between states and assessing each state's 'fair share' of mitigation action.[35] This moral indeterminacy makes it more challenging for observers to assess whether any given state is cooperating in good faith and consequently easier for any state to evade its responsibilities.[36] Beside the challenges of international cooperation, mitigation is further hindered by an intergenerational issue: current governments may be inclined to ignore the impacts of climate change that will unfold decades or centuries later, thus in effect 'passing the buck' of climate change to future generations, despite the greater risks associated with delaying mitigation action.[37]

Some of the most intense and complex international negotiations have been taking place for more than three decades in an attempt to develop international legal rules to spur action on climate change mitigation.[38] The 1992 UN Framework

excluding it), according to data from the Climate Analysis Indicators Tool. See ClimateWatch, 'Historical GHG Emissions' (no date) <https://www.climatewatchdata.org/> (CAIT database).

[30] Ottmar Edenhofer and others, 'Summary for Policymakers' in Edenhofer and others (eds) (n 1) 5.

[31] See Garrett Hardin, 'The Tragedy of the Commons' (1968) 162 Science 1243; Stephen M Gardiner, 'A Perfect Moral Storm: Climate Change, Intergenerational Ethics and the Problem of Moral Corruption' (2006) 15 Environmental Values 397; Eric A Posner and David Weisbach, *Climate Change Justice* (Princeton UP 2010) 181.

[32] See Edenhofer and others (n 30) 15–16.

[33] Myles Allen and others, 'Summary for Policymakers' in Valérie Masson-Delmotte and others (eds), *Global Warming of 1.5°C: An IPCC Special Report* (IPCC 2019) 15.

[34] Joeri Rogelj and others, 'Scenarios towards Limiting Global Mean Temperature Increase below 1.5°C' (2018) 8 Nature Climate Change 325, 327.

[35] Factors that may be relevant include levels of historical and present emissions, populations, levels of development, financial and technological capacities, geographical resources, and adjustment costs. See Aaditya Mattoo and Arvind Subramanian, 'Equity in Climate Change: An Analytical Review' (2012) 40 World Development 1083.

[36] See Robert Stavins and others, 'International Cooperation: Agreements & Instruments' in Edenhofer and others (eds) (n 1) 1007.

[37] See Stephen M Gardiner, *A Perfect Moral Storm: The Ethical Tragedy of Climate Change* (OUP 2011) 143–84; Charles Kolstad and others, 'Social, Economic, and Ethical Concepts and Methods' in Edenhofer and others (eds) (n 1) 216.

[38] See eg UNGA Resolutions 43/53 (n 5) ¶10(e); 44/207 (22 December 1989) ¶10; 75/217 (n 18) ¶1.

Convention on Climate Change (UNFCCC) outlined general objectives, principles, and commitments; it also created processes and institutions to carry out and support further negotiations, including the Conference of the Parties (COP).[39] The Kyoto Protocol was adopted five years later to define quantified emission limitation and reduction commitments applicable to developed country parties for a first commitment period from 2008 to 2012.[40] The Doha Amendment extended the Kyoto Protocol to a second commitment period from 2013 to 2020,[41] while the COP had also invited the communication of informal national targets for the same period.[42] In 2015, the parties to the UNFCCC adopted another treaty, the Paris Agreement, which requires each party to communicate regularly its 'nationally determined contribution' (NDC) to the global response to climate change and to take the measures necessary to achieve this contribution.[43]

States have also adopted relevant legal norms under the Vienna Convention for the Protection of the Ozone Layer (with regard to halogen compounds)[44] and under treaties on international aviation[45] and on the prevention of marine pollution.[46] They have discussed climate change mitigation at the UN General Assembly,[47] the Security Council,[48] the Human Rights Council,[49] and conferences of the parties to various multilateral environmental agreements.[50] Other initiatives have taken

[39] UNFCCC (n 8).

[40] Kyoto Protocol to the United Nations Framework Convention on Climate Change (11 December 1997, in force 16 February 2005) 2303 UNTS 162.

[41] Doha Amendment to the Kyoto Protocol (8 December 2012, in force 31 December 2020) C.N.718.2012.TREATIES-XXVII.7.c.

[42] Decision 1/CP.16, 'The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention' (10–11 December 2010) FCCC/CP/2010/7/Add.1, 2, ¶¶37, 50. See also Copenhagen Accord of 18 December 2009, appended to Decision 2/CP.15, 'Copenhagen Accord' (18–19 December 2009) FCCC/CP/2009/11/Add.1, ¶¶4–5.

[43] Paris Agreement (n 16) art 4(2).

[44] See Vienna Convention for the Protection of the Ozone Layer (22 March 1985, in force 22 September 1988) 1513 UNTS 293; Montreal Protocol on Substances that Deplete the Ozone Layer (16 September 1987, in force 1 January 1989) 1522 UNTS 3; Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer (15 October 2016, in force 1 January 2019) (2017) 56 ILM 193 ('Kigali Amendment').

[45] Convention on International Civil Aviation (7 December 1944, in force 4 April 1947) 15 UNTS 295 ('Chicago Convention') Annex 16 vol III 'Aeroplane CO_2 Emissions' (2017), vol IV 'Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)' (2018).

[46] International Convention for the Prevention of Pollution from Ships (2 November 1973), as modified by Protocol of 1978 relating thereto (17 February 1978, in force 2 October 1983) 1340 UNTS 61 ('MARPOL 73/78'); Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships of 2 November 1973, as modified by the Protocol of 17 February 1978 (26 September 1997, in force 19 May 2005) TIAS No 9–108; Res MEPC.203(62), 'Amendments to the Annex of the Protocol of 1997 to Amend the International Convention for the Prevention of Pollution from Ships, 1973, as Modified by the Protocol of 1978 Relating Thereto' (15 July 2011, amendment entered into force 1 January 2013).

[47] See eg UNGA Resolutions 43/53 (n 5); 75/217 (n 18).

[48] See generally Security Council Report, 'The UN Security Council and Climate Change' (Research Report 2021 No 2).

[49] See eg Human Rights Council Resolutions 10/4 (25 March 2009) A/HRC/RES/10/4; 47/24 (14 July 2021) A/HRC/RES/47/24.

[50] See eg COP/CBD decision 14/5, 'Biodiversity and Climate Change' (Sharm El-Sheikh, 17–29 November 2018). See also references below at 132.

place under the aegis of the Asia-Pacific Economic Cooperation,[51] the G7,[52] the G20,[53] the World Bank,[54] or through regional or bilateral negotiations.[55] Beyond states, multilateral initiatives have involved autonomous territories, subnational governments, and even private actors.[56]

Despite such intense effort, negotiations have not prompted sufficient international action on climate change mitigation. Echoing the warnings of the scientific community and the concerns of civil societies, states have repeatedly expressed 'profound alarm that emissions of greenhouse gases continue to rise globally'.[57] The specific commitments that states have made, for instance through their NDCs, fall short of what would be needed to achieve the collective objectives that they have agreed upon.[58] These shortcomings of international negotiations have led civil society organizations to explore the potential of holding governments (or possibly other stakeholders) to account on the basis of general legal norms, including under international law, which can be applied as requiring more mitigation action than states have expressly committed to. In particular, some recent and ongoing judicial cases contemplate the possibility of inferring general mitigation obligations from customary international law or from human rights treaties,[59] and small island developing states have been actively contemplating the possibility of initiating advisory proceedings before the International Court of Justice (ICJ) and the International Tribunal for the Law of the Sea.[60]

[51] See eg APEC (Sydney Summit), 'Leaders' Declaration on Climate Change, Energy Security and Clean Development' (2007); APEC (Lima Summit), Leaders' Declaration (2016).

[52] G7 Climate and Environment Ministers' Communiqué (21 May 2021).

[53] See eg G20 (Pittsburgh Summit), 'Leaders' Statement' (2009) ¶29.

[54] See eg Coalition of Finance Ministers for Climate Action, *Helsinki Principles* (February 2019), principles 3, 4; World Bank, 'Zero Routine Flaring by 2030' (no date) <https://perma.cc/V34J-29HZ>.

[55] See eg US–China Joint Announcement on Climate Change (12 November 2014); EU–China Leaders' Statement on Climate Change and Clean Energy (16 July 2018); ASEAN, 'Joint Statement on Climate Change to the 25th Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change' (2 November 2019).

[56] See Jolene Lin, *Governing Climate Change: Global Cities and Transnational Lawmaking* (CUP 2018); David Miller, *Solved: How the World's Great Cities Are Fixing the Climate Crisis* (Buffalo 2020).

[57] The Future We Want, UNGA Resolutions 66/288 (27 July 2012) ¶190; 75/217 (n 18) ¶1; Political Declaration of the High-Level Political Forum on Sustainable Development (n 18) ¶11.

[58] See eg Decisions 1/CP.21, 'Adoption of the Paris Agreement' (12 December 2015) FCCC/CP/2015/10/Add.1, 2, ¶17; UNEP DTU Partnership, 'Emissions Gap Report 2021' (UNEP 2021); Decision –1/CP.26, 'Glasgow Climate Pact' (13 November 2021) FCCC/CP/2021/12/Add.1 (advance version), 2, ¶¶4, 18.

[59] See eg *Urgenda v Netherlands*, ECLI:NL:HR:2019:2007 (SC, 20 December 2019), English translation in (2020) 59 ILM 811; *Grande-Synthe v France* (Conseil d'Etat, 19 November 2020), ECLI:FR:CECHR:2020:427301.20201119; *R (Friends of the Earth) v Heathrow* [2020] UKSC 52, [2021] 2 All ER 967; *Natur og Ungdom v Norway*, Case No 20–051052SIV-HRET (SC, 22 December 2020), English translation <https://perma.cc/5PCS-A8YH>; *Klimaatzaak v Belgium*, Case No 2015/4585/A (French-Speaking Tribunal of First Instance of Brussels, 17 June 2021), English translation <https://perma.cc/68ZJ-2F96>.

[60] See Agreement for the Establishment of the Commission of Small Island States on Climate Change and International Law (31 October 2021) <https://perma.cc/D688-7R93> art 2(2); Bernadette Carreon, 'Vanuatu to Seek International Court Opinion on Climate Change Rights', *The Guardian* (26 September

Various norms of general international law could possibly be interpreted as requiring action on change mitigation. The principle of sovereign equality—one of the foundations of the contemporary world order[61]—implies that each state has a due diligence obligation to respect and protect the rights of other states,[62] including by preventing transboundary environmental harm.[63] States also have a general obligation to cooperate in solving international problems, including those of a global environmental nature such as climate change.[64] Treaty provisions relating to the protection and preservation of environmental and cultural resources may require states to mitigate climate change insofar as this is essential to preventing the foreseeable impacts of climate change on these resources.[65] Similarly, given the impact of climate change on the enjoyment of various human rights, there is at least a plausible argument that human rights treaties may imply an obligation for states to mitigate climate change.[66]

C. Doctrinal Analysis

This book is a doctrinal study of the international law on climate change mitigation. This section justifies the need for, and the possibility of, this doctrinal analysis.

2021). On a previous attempt, see 'Palau Seeks UN World Court Opinion on Damage Caused by Greenhouse Gases' UN News (22 September 2011). See also Benoit Mayer, 'International Advisory Proceedings on Climate Change' 44 Mich J Intl L (forthcoming).

[61] Charter of the United Nations (26 June 1945, in force 24 October 1945) art 2(1).

[62] See eg Declaration on Principles of International Law Concerning Friendly Relations and Cooperation among States in Accordance with the Charter of the United Nations, UNGA Res 625 (XXV) (24 October 1970).

[63] See Declaration of the United Nations Conference on the Human Environment (16 June 1972) A/Conf.48/14/Rev.1 (1972) 11 ILM 1416 ('Stockholm Declaration'), principle 21; Rio Declaration on Environment and Development (14 June 1992) A/CONF.151/26 (vol I) (1992) 31 ILM 874, principle 2; *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion (8 July 1996), [1996] ICJ Rep 226, ¶29. See generally Philippe Sands and Jacqueline Peel, *Principles of International Environmental Law* (4th edn, CUP 2018) 201, characterizing the no-harm principle as 'the cornerstone of international environmental law'; ILC, 'Draft Guidelines on the Protection of the Atmosphere' in ILC Report, 72nd session, A/76/10 (2021) 13, guideline 3, inferring an 'obligation to protect the atmosphere'.

[64] See UN Charter (n 61) art 56 (read alongside arts 1(3), 55); United Nations Convention on the Law of the Sea (10 December 1982, in force 16 November 1994) 1833 UNTS 3, art 197; Rio Declaration (n 63) principle 7; ILC, 'Atmosphere' (n 63) guideline 3.

[65] See eg Convention for the Protection of the World Cultural and Natural Heritage (16 November 1972, in force 17 December 1975) 1037 UNTS 551, art 4; UNCLOS (n 64) art 192; Convention on Biological Diversity (5 June 1992, in force 29 December 1993) 1760 UNTS 79, art 6.

[66] See eg International Covenant on Economic, Social and Cultural Rights (16 December 1966, in force 3 January 1976) 993 UNTS 3, art 2(1); Convention on the Rights of the Child (20 November 1989, in force 2 September 1990) 1577 UNTS 3, art 2(1).

1. The Need for Doctrinal Analysis

The expansion of climate law as a field of practice has been accompanied by an increasing amount of research on climate law. A growing number of monographs and edited volumes have been published in recent years, including two textbooks,[67] along with numerous articles in two specialized peer-reviewed journals[68] and in mainstream environmental and international law journals. Most of this burgeoning literature describes, comments on, or analyses recent developments that are taking place on the international or domestic plane, involving at times comparative, critical, or empirical legal methodologies as well as policy, economic, and normative analyses of the law.[69] The literature often seeks to assess the significance of developments in climate law, whether in terms of effectiveness or of justice, and to suggest possible or desirable ways forward.

By contrast, the emphasis of the literature has not generally been on doctrinal research aimed at determining what the law is, and thus predicting how courts would decide future cases,[70] especially not beyond the scope of climate treaties.[71] The prevailing view in the field puts legal force in broader perspective. Thus, as Daniel Bodansky pointed out, the legal force of the Paris Agreement is, after all, 'only one factor in assessing the significance of the Paris outcome'[72]—non-binding documents could be highly effective in prompting international cooperation, while legally binding ones may be ineffective if the rules that they contain are unhelpful. That does not mean, however, that the legal force of the Paris Agreement is irrelevant. While doctrine is obviously not the only thing worth researching, it does, however, matter for at least three reasons.

[67] Daniel Bodansky, Jutta Brunnée, and Lavanya Rajamani, *International Climate Change Law* (OUP 2017); Benoit Mayer, *The International Law on Climate Change* (CUP 2018).

[68] 'Carbon and Climate Law Review' (Lexxion) was founded by Michael Mehling in 2007, while 'Climate Law' (Brill) was founded by Alexander Zahar in 2010.

[69] See Ronald B Mitchell, 'Climate Law: Accomplishments and Areas for Growth' (2018) 8 Climate Law 135, 137, noting the prevalence of articles 'describing and analysing international, national, and subnational legal developments' in the articles published in two specialized journals.

[70] See Emerson H Tiller and Frank B Cross, 'What Is Legal Doctrine?' (2006) 100 Northwestern UL Rev 517, 517; Mike McConville and Wing Hong Chui, 'Introduction and Overview', *Research Methods for Law* (Edin UP 2007) 3–4.

[71] On climate treaties, see Sebastian Oberthür and Hermann E Ott, *The Kyoto Protocol: International Climate Policy for the 21st Century* (Springer 1999); Farhana Yamin and Joanna Depledge, *The International Climate Change Regime: A Guide to Rules, Institutions and Procedures* (CUP 2004); Daniel Klein and others (eds), *The Paris Agreement on Climate Change: Analysis and Commentary* (OUP 2017); Geert van Calster and Leonie Reins (eds), *The Paris Agreement on Climate Change: A Commentary* (EE 2021).

[72] Daniel Bodansky, 'The Legal Character of the Paris Agreement' (2016) 25 RECIEL 142, 142. See also Jutta Brunnée, 'COPing with Consent: Law-Making under Multilateral Environmental Agreements' (2002) 15 LJIL 1, 32, suggesting that bindingness does not always render a norm enforceable or otherwise able to influence state conduct; Lavanya Rajamani, 'Innovation and Experimentation in the International Climate Change Regime' (2020) 404 RdC 9, 104; David B Hunter, 'The Hard Choice for Soft Commitments in the Climate Change Regime' in Daniel Bradlow and David Hunter (eds), *Advocating Social Change through International Law* (Brill 2020).

First, legal norms have a distinct influence on the conduct of various actors, including states, that non-binding instruments do not have.[73] With the identification of legal norms comes an understanding that 'certain kinds of human conduct are no longer optional, but in *some* sense obligatory'.[74] The strenuous efforts that states make to justify their conduct in light of international law says something about the importance their governments attach to complying with international law—or, at least, appearing to do so. To name but a few prominent illustrations, intense scholarly and political debates took place regarding the legality of the US invasion of Iraq,[75] China's assertion of sovereignty in the South China Sea,[76] and Russia's 2014 annexation of Crimea,[77] possibly because of the implications that claims of illegality could have for the internal and international legitimacy of even the most powerful governments.[78] Likewise, the content of states' mitigation obligations can be expected to matter to governments and their constituencies.

Second, the existence of legal norms matters to processes aimed at interpreting or applying the law. Admittedly, climate treaties do not create compulsory dispute settlement mechanisms, and the compliance mechanisms they establish are relatively weak.[79] Yet, nothing precludes the use of non-specific dispute settlement mechanisms. As such, it is not inconceivable that, sooner or later, an international court or tribunal may be asked to interpret states' obligations on climate change mitigation, whether in contentious or (perhaps more appropriately) advisory proceedings.[80] In any case, such questions can be brought to domestic courts, either

[73] Robert Howse and Ruti Teitel, 'Beyond Compliance: Rethinking Why International Law Really Matters' (2010) 1 Global Policy 127; Jana von Stein, 'The Engines of Compliance' in Jeffrey L Dunoff and Mark A Pollack (eds), *Interdisciplinary Perspectives on International Law and International Relations: The State of the Art* (CUP 2013).

[74] HLA Hart, *The Concept of Law* (3rd edn, OUP 2012) 6 (emphasis in the original).

[75] See Sean D Murphy, 'Assessing the Legality of Invading Iraq' (2003) 92 Georgetown LJ 173; Ronli Sifris, 'Operation Iraqi Freedom: United States v Iraq: The Legality of the War' (2003) 4 Melbourne JIL 521; Philippe Sands, 'Lawless World: The Bush Administration and Iraq: Issues of International Legality and Criminality' (2005) 29 Hastings Intl & Comp LR 295.

[76] See Robert Beckman, 'The UN Convention on the Law of the Sea and the Maritime Disputes in the South China Sea' (2013) 107 AJIL 142; S Jayakumar, Tommy Koh, and Robert Beckman (eds), *The South China Sea Disputes and Law of the Sea* (EE 2014); special issue on 'South China Sea Arbitration' (2016) 110 AJIL Unbound 263–95; Chinese Society of International Law, 'The South China Sea Arbitration Awards: A Critical Study' (2018) 17 Chinese JIL 207.

[77] See Christian Marxsen, 'The Crimea Crisis: An International Law Perspective' (2014) 74 ZaoRV 367; Thomas D Grant, 'Annexation of Crimea' (2015) 109 AJIL 68; Alisa Gdalina, 'Crimea and the Right to Self-Determination: Questioning the Legality of Crimea's Secession from Ukraine Note' (2015) 24 Cardozo J Intl & Comp L 531.

[78] See Andrew T Guzman, 'A Compliance-Based Theory of International Law' (2002) 90 Cal L Rev 1823; Shirley V Scott and Olivia Ambler, 'Does Legality Really Matter? Accounting for the Decline in US Foreign Policy Legitimacy Following the 2003 Invasion of Iraq' (2007) 13 EJIR 67, explaining how illegality affected the perceived legitimacy of the US's invasion of Iraq.

[79] See UNFCCC (n 8) art 14; Kyoto Protocol (n 40) art 19; Paris Agreement (n 16) art 24.

[80] See note 60. See also Philippe Sands, 'Climate Change and the Rule of Law: Adjudicating the Future in International Law' (2016) 28 JEL 19; Margaretha Wewerinke-Singh, *State Responsibility, Climate Change and Human Rights under International Law* (Hart 2019); Margaretha Wewerinke-Singh and Diana Hinge Salili, 'Between Negotiations and Litigation: Vanuatu's Perspective on Loss and Damage from Climate Change' (2019) 20 Climate Policy 681; Tim Stephens, 'See You in Court? A Rising Tide of International Climate Litigation' *The Interpreter* (30 October 2019).

directly (in monistic states) or as background to interpreting national law. Already, the Supreme Court of the Netherlands in *Urgenda* has interpreted the European Convention on Human Rights (ECHR) as requiring the state to achieve a 25 per cent emission reduction by 2020 compared with 1990.[81] Courts in several other countries have discussed international climate law in the context of the interpretation of domestic law,[82] and several human rights treaty bodies have discussed the obligations on climate change mitigation that can be inferred from human rights treaties.[83] Several relevant cases and individual communications have been filed before the European Court of Human Rights (ECtHR) and human rights treaty bodies.[84]

Third, an accurate understanding of legal norms matters as a prerequisite for other types of research. Scholars in climate law have recognized the importance of making use of innovative methodologies in further research, including empirical, comparative, interdisciplinary, and critical research,[85] but each of these methodologies requires a preliminary understanding of what the law is. It is only when informed by a thorough understanding of the law that legal scholars can make a distinct contribution to academic and political debates on the responses to climate change.

Existing scholarship does not fulfil this need for a coherent doctrinal analysis of the international law on climate change mitigation. A government adviser, a judge, or a researcher, reading the current literature on climate law to try to find out what states or other entities are required to do regarding climate change mitigation, would find few clear answers, even with regard to some of the most essential questions.

A case in point is the question of the legal force of NDCs—the documents that contain parties' main targets on climate change mitigation under the Paris Agreement. An admittedly rather convoluted provision of the Agreement requires its parties to 'pursue domestic mitigation measures, with the aim of achieving the objectives of' these NDCs.[86] The literature on the Paris Agreement provides no definitive interpretation of this key legal provision.[87] Bodansky suggests that this

[81] See *Urgenda* (SC) (n 59).

[82] See eg *Thomson v Minister for Climate Change Issues* [2017] NZHC 733, [2018] 2 NZLR 160, ¶38; *Grande-Synthe* (n 59) ¶9–13; *Friends of the Earth* (n 59) ¶70; *Natur og Ungdom* (n 59) ¶¶56–58.

[83] See eg Concluding Observations of the CESCR on the Fifth Periodic Report of Australia, E/C.12/AUS/CO/5 (2017) ¶12; on the Sixth Periodic Report of Russia, E/C.12/RUS/CO/6 (2017) ¶¶42–43.

[84] See below at 131.

[85] See Michael Mehling, 'The Comparative Law of Climate Change: A Research Agenda' (2015) 24 RECIEL 341; Sébastien Jodoin, *Forest Preservation in a Changing Climate: REDD + and Indigenous and Community Rights in Indonesia and Tanzania* (CUP 2017); Mitchell (n 69) 143; Benoit Mayer, 'The Critical Functions of Scholarship in Climate Law' (2018) 8 Climate Law 151; Sarah Mason-Case, 'On Being Companions and Strangers: Lawyers and the Production of International Climate Law' (2019) 32 LJIL 625.

[86] Paris Agreement (n 16) art 4(2), second sentence.

[87] See Harro van Asselt, 'Review of Daniel Klein and others (eds), *The Paris Agreement on Climate Change: Analysis and Commentary*' (2019) 8 TEL 379, 381.

provision 'was formulated as an "aim" rather than as a legal obligation'.[88] Likewise, Jutta Brunnée asserts that NDCs 'are not internationally binding'.[89] By contrast, Lavanya Rajamani views this provision as the expression of 'binding obligations of conduct coupled with a good faith expectation of results'.[90] Yet, Rajamani does not further elaborate on the definitions or implications of a 'good faith expectation', a concept largely unknown in international law scholarship,[91] therefore with little explanatory value.

Other concepts are widely used in the literature on climate law in spite of their uncertain meaning and implications. For instance, much of the legal literature on the Paris Agreement orbits around what is presented as a dichotomy between 'procedural' and 'substantive' obligations.[92] In the broader context of international environmental law, the distinction is known to be rather confusing—the ICJ characterized the requirement to conduct an environmental impact assessment (EIA) as a substantive obligation in its 2010 judgment in *Pulp Mills*,[93] yet, in its 2015 judgment in *Certain Activities*, this same obligation was presented as a procedural obligation.[94] Similarly, there is no obvious ground to consider that the obligation to 'pursue domestic mitigation measures' is distinctively procedural rather than substantive,[95] or the other way

[88] Daniel Bodansky, 'The Paris Climate Change Agreement: A New Hope?' (2016) 110 AJIL 288, 295.

[89] Jutta Brunnée, 'Procedure and Substance in International Environmental Law' (2019) 450 RdC 9, 89.

[90] Lavanya Rajamani, 'The 2015 Paris Agreement: Interplay between Hard, Soft and Non-Obligations' (2016) 28 JEL 337, 354. See also Lavanya Rajamani and Jutta Brunnée, 'The Legality of Downgrading Nationally Determined Contributions under the Paris Agreement: Lessons from the US Disengagement' (2017) 29 JEL 537, 541–542.

[91] No occurrence of the phrase 'good faith expectation' could be found in either the *Recueil des Cours of the Hague Academy of International Law* or the *Max Planck Encyclopedias of Public International Law*. Nonetheless, a dozen subsequent publications reaffirm that the Paris Agreement creates a 'good faith expectation of results' without explaining what this means. See eg Sharaban Tahura Zaman, 'Exploring the Legal Nature of Nationally Determined Contributions (NDCs) under International Law' (2015) 26 YB Intl Envtl L 98, 117, 125; Mario Gervasi, 'On the United States' Decision to Withdraw from and Cease Implementation of the Paris Agreement on Climate Change' (2019) 18 Chinese JIL 98, 117; Myele Rouxel, 'The Paris Rulebook's Rules on Transparency: A Compliance Pull?' (2020) 14 CCLR 18, 20, 31.

[92] See James Crawford, 'The Current Political Discourse Concerning International Law' (2018) 81 MLR 1, 21; Brunnée, 'Procedure and Substance' (n 89); Sebastian Oberthür and Lisanne Groen, 'Hardening and Softening of Multilateral Climate Governance towards the Paris Agreement' (2020) 22 J Envtl Policy & Planning 801, 803, 305; Rajamani, 'Innovation and Experimentation' (n 72) 114–15; Brian J Preston, 'The Influence of the Paris Agreement on Climate Litigation: Legal Obligations and Norms (Part I)' (2021) 33 JEL 1, 6.

[93] *Pulp Mills on the River Uruguay (Argentina v Uruguay)*, Judgment (20 April 2010), [2010] ICJ Rep 14, ¶204.

[94] *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v Costa Rica)*, Judgment on Merit (16 December 2015), [2015] ICJ Rep 665, ¶104.

[95] Paris Agreement (n 16) art 4(2), second sentence. See Lavanya Rajamani and Jacob Werksman, 'The Legal Character and Operational Relevance of the Paris Agreement's Temperature Goal' (2018) 376 Philos Trans R Soc A 2016.0458, 3; Crawford, 'The Current Political Discourse' (n 92) 21; Lavanya Rajamani, 'Integrating Human Rights in the Paris Climate Architecture: Contest, Context, and Consequence' (2019) 9 Climate Law 180, 181–2, each suggesting that the Paris Agreement only creates procedural obligations.

round.[96] As far as a doctrinal analysis is concerned, it appears that the characterization of an obligation as either substantive or procedural is unhelpful because it has no direct implications for the interpretation of the obligation.[97] In the literature on the Paris Agreement, this distinction seems mainly intended to reflect judgments about the effectiveness of a rule, based on the assumption that 'substantive' obligations are generally more effective than 'procedural' ones.

'Collective obligation' is another concept whose use has burgeoned in the literature on climate law (in particular on the Paris Agreement)[98] even though it is unheard of in the broader international law literature.[99] If the concept is understood as an obligation held by a collective, it is a contradiction in terms: only an (individual) legal person has the legal capacity necessary for possessing an international obligation and being held responsible for its breach.[100] Conversely, if a 'collective obligation' were to bind a group that has a legal personality (like a state or an international organization), then the obligation would not genuinely be collective: it would be an obligation applicable to an individual legal person. Yet, nothing in the Paris Agreement suggests that the parties were given legal personality to act as a group. Rather, the use of the concept seems to reflect a confusion between obligations (the breach of which entails responsibility) and objectives (the non-achievement of which does not automatically entail any legal consequences).[101]

Further adding to the confusion, commentators have depicted legal bindingness as a matter of degree, suggesting the existence of a continuum between obligations and 'non-obligations' in climate law.[102] An obligation, by definition, is

[96] Alan Boyle and Catherine Redgwell, *International Law and the Environment* (4th edn, OUP 2021), 393.

[97] See below at 210.

[98] See Rajamani, 'The 2015 Paris Agreement' (n 90) 343; Christina Voigt, 'The Paris Agreement: What Is the Standard of Conduct for Parties?' (2016) 18 QIL 17, 17; Bodansky, 'Legal Character' (n 72) 145; Anna Huggins, 'The Evolution of Differential Treatment in International Climate Law: Innovation, Experimentation, and "Hot" Law' (2018) 8 Climate Law 195, 204; Alexander Zahar, 'Collective Obligation and Individual Ambition in the Paris Agreement' (2020) 9 TEL 165.

[99] The phrase 'collective obligation' could be found only once in the entire *Recueil des Cours of the Hague Academy of International Law* and once in the entire *Max Planck Encyclopedias of Public International Law*, each time in different senses. See Malgosia A Fitzmaurice, 'International Protection of the Environment' (2019) 293 RdC 9 219, where the concept is used to refer to obligations owed to the international community as a whole (erga omnes); Said Mahmoudi, 'Islamic Approach to International Law' in *Max Planck Encyclopedia of Public International Law* (online edn, OUP 2019) ¶39, referring to an obligation borne by each member of a group.

[100] See *Reparation for Injuries Suffered in the Service of the United Nations*, Advisory Opinion (11 April 1949), [1949] ICJ Rep 174, 178–79; Hugh Thirlway, 'The Law and Procedure of the International Court of Justice 1960–1989: Part Seven' (1996) 66 BYBIL 1, 49 (defining an obligation as 'something owed by one or more subjects of international law to one or more subjects of international law'); Robert Jennings and Arthur Watts (eds), *Oppenheim's International Law: Volume 1 Peace* (9th edn, OUP 2008) §33 (Oppenheim's); Roland Portmann, *Legal Personality in International Law* (CUP 2010) 8.

[101] See eg Zahar, 'Collective Obligation' (n 98) 15, 24, referring interchangeably to 'collective obligation' and 'collective aim'.

[102] See Antto Vihma, 'Analyzing Soft Law and Hard Law in Climate Change' in Erkki J Hollo, Kati Kulovesi, and Michael Mehling (eds), *Climate Change and the Law* (Springer 2013); Rajamani, 'The 2015 Paris Agreement' (n 90); Peter Lawrence and Daryl Wong, 'Soft Law in the Paris Climate Agreement: Strength or Weakness?' (2017) 26 RECIEL 276. See also Stavins and others (n 36) 1019–20,

'binding':[103] it is therefore difficult to make sense of Judge James Crawford's assertion of the need 'to distinguish between binding and non-binding obligations within the Paris Agreement'.[104] Rajamani suggested the existence of a 'spectrum of legal character from hard obligations to non-obligations' with an intermediary category of 'soft obligations'.[105] Yet, unlike other characteristics of a norm (such as its significance, clarity, or effectiveness), bindingness is a question that requires a binary treatment:[106] non-performance either entails state responsibility or it does not.[107] Thus, the concept of 'soft law'[108] does not allow a better grasp of what the law is:[109] there is no room in a doctrinal analysis for conceptualizing 'soft', 'quasi', or 'half' obligations,[110] any more than a court could find a state 'half-responsible' for a 'half-wrongful' act. There is often a confusion between the legal force of a provision, on the one hand, and its content or nature, on the other hand: an obligation remains binding even if its content is vague[111] and even if the obligation only requires an endeavour rather than a result.[112] Determining that a provision is non-binding, naturally, does not necessarily exclude the relevance of this provision to the emergence, interpretation, or application of legal obligations.[113]

noting that 'international agreements . . . may be more or less "legally binding" ' and that 'commitments may be more or less legally binding'.

[103] 'Obligation' in *Oxford English Dictionary* (online edn, OUP 2021).

[104] Crawford, 'The Current Political Discourse' (n 92) 21. See also Sandrine Maljean-Dubois, Thomas Spencer, and Matthieu Wemaere, 'The Legal Form of the Paris Climate Agreement: A Comprehensive Assessment of Options' (2015) 9 CCLR 68, 83 ('Non-Mandatory Substantive Obligations'); Lawrence and Wong (n 102) (' "soft" non-binding obligations').

[105] Rajamani, 'The 2015 Paris Agreement' (n 90) 352.

[106] Jan Klabbers, 'The Redundancy of Soft Law' (1996) 65 Nordic J Intl L 167, 181; Kal Raustiala, 'Form and Substance in International Agreements' (2005) 99 AJIL 581, 586.

[107] Cf Jonathan Pickering and others, 'Global Climate Governance between Hard and Soft Law: Can the Paris Agreement's "Crème Brûlée" Approach Enhance Ecological Reflexivity?' (2019) 31 JEL 1, 14, discussing the 'relatively low degree of obligation' in the Copenhagen Accord and the Cancun Agreements.

[108] See RR Baxter, 'International Law in "Her Infinite Variety" ' (1980) 29 ICLQ 549, 554, 556.

[109] See Prosper Weil, 'Towards Relative Normativity in International Law?' (1983) 77 AJIL 413; Jan Klabbers, 'The Undesirability of Soft Law' (1998) 67 Nordic J Intl L 381; Raustiala (n 106) 588.

[110] See David Hume, *A Treatise of Human Nature* (Clarendon Press 1896), book III, pt II, §VI, qualifying 'half rights and obligations' as 'perfect absurdities'.

[111] See Tullio Scovazzi, 'Some Remarks on International Responsibility in the Field of Environmental Protection', in Maurizio Ragazzi (ed), *International Responsibility Today: Essays in Memory of Oscar Schachter* (Brill 2005) 201; Rosa M Fernández Egea, 'State Responsibility for Environmental Harm, "Revisited" within the Climate Change Regime' in Sandrine Maljean-Dubois and Lavanya Rajamani (eds), *La mise en œuvre du droit international de l'environnement, Implementation of International Environmental Law* (Martinus Nijhoff 2011) 338, arguing that '[t]he vagueness of rules does not mean that States are not bound to the obligations they might entail'.

[112] See *Indus Waters Kishenganga (Pakistan/India)*, Partial Award (18 February 2013), 31 RIAA 55, ¶372. Cf Brunnée, 'Procedure and Substance' (n 89) 89.

[113] See Vienna Convention on the Law of Treaties (23 May 1969, in force 27 January 1980) 1155 UNTS 331, art 31; Pierre-Marie Dupuy, 'Soft Law and the International Law of the Environment' (1990) 12 Mich J Intl L 420, 433; Dinah Shelton, 'Introduction: Law, Non-Law and the Problem of "Soft Law" ' in Dinah Shelton (ed), *Commitment and Compliance: The Role of Non-Binding Norms in the International Legal System* (OUP 2003) 1; Hollin Dickerson, 'Best Practices' in *Max Planck Encyclopedia of Public International Law* (online edn, OUP 2010) ¶¶21–22.

While scholarship on climate law has largely focused on negotiated instruments, far less scholarly research has explored the potential relevance of customary international law and treaties of a general ambit such as human rights treaties. For instance, the leading textbook on international climate law devotes only ten pages to these questions.[114] And when the complex questions relating to the identification and interpretation of relevant customary obligations have been addressed at all, it has often been in brief preliminary sections in studies focused on the responsibility of states for alleged breaches of these obligations.[115]

Both the International Law Association and the International Law Commission (ILC) have sought to clarify the general international law on climate change, but their conclusions remain overly general. The ILC's Draft Guidelines on the Protection of the Atmosphere adopted in second reading in 2021, for instance, note that states have 'the obligation to protect the atmosphere by exercising due diligence in taking appropriate measures', but they do not define the requirement of due diligence or the 'appropriate measures' that must be taken—except that they must be 'in accordance with applicable rules of international law'.[116] This limited collective understanding of mitigation obligations is increasingly problematic as courts and other institutions are called upon to interpret and apply these obligations.

2. The Possibility of Doctrinal Analysis

While agreeing to the need for doctrinal analysis of the international law on climate change mitigation, one could question the possibility of conducting this analysis. In particular, one could question the existence of a complete and consistent set of international legal norms on climate change mitigation that doctrinal analysis could discover.

At the most fundamental level, this objection goes against influential theories that describe international law—or, in fact, any legal system—as necessarily a complete and consistent normative system. Hersch Lauterpacht's seminal book,

[114] Bodansky, Brunnée, and Rajamani (n 67) 40–44, 304–08. See also Yamin and Depledge (n 71) 13, briefly acknowledging that customary law may apply to climate change.

[115] See Roda Verheyen, *Climate Change Damage and International Law: Prevention Duties and State Responsibility* (Brill 2005) 145–92; René Lefeber, 'Climate Change and State Responsibility' in Rosemary Rayfuse and Shirley V Scott (eds), *International Law in the Era of Climate Change* (EE 2012) 321; Elena Kosolopova, *Interstate Liability for Climate Change-Related Damage* (Eleven 2013) 145–61; Wewerinke-Singh (n 80) 55–59; Agnes Chong, 'The Positive Obligation to Prevent Climate Harm under the Law of Responsibility', Georgetown Envtl L Rev (forthcoming).

[116] ILC, 'Atmosphere' (n 63) guideline 3. See discussion in Benoit Mayer, 'A Review of the International Law Commission's Guidelines on the Protection of the Atmosphere' (2019) 20 Melbourne JIL 453, 476–77. See also International Law Association, 'Resolution 2/2014: Declaration of Legal Principles Relating to Climate Change' (2014) 76 ILA Rep Conferences 21, in particular draft arts 7A (obligation of Prevention), 7B (precautionary principle), 8 (obligation of cooperation).

The Function of Law in the International Community, has already argued that 'the completeness of the rule of law … is an *a priori* assumption of every system of law'.[117] Likewise, Hans Kelsen submitted that the absence of any applicable norm in a concrete case 'is logically not possible'.[118] From a more pragmatic perspective, *Oppenheim's International Law* suggests that international law has developed into a 'complete system' whereby 'every international situation is capable of being determined as a matter of law, either by the application of specific legal rules where they already exist, or by the application of legal rules derived, by the use of known legal techniques, from other legal rules or principles'.[119]

The completeness and consistency of the law is a necessary condition for the requirement of judges to adjudicate disputes before them. Legal systems require judges to apply the law notwithstanding the difficulty of the task,[120] and international law is no exception. Thus, international courts and tribunals have never refused to decide a contentious case on the basis that the law was unclear (*non liquet*).[121] The closest there is to an exception has been the ICJ's Advisory Opinion on *Legality of the Threat or Use of Nuclear Weapons*, where an equally divided bench declared, by the president's casting vote, that it could not 'conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence, in which the very survival of a state would be at stake'.[122] This, however, does not indicate that the Court would ever be unable to apply the law in an actual dispute where the Court could assess, in light of concrete facts, the proportionality and necessity of the use or threat of use of such weapons.[123] Unlike contentious cases, the exercise of jurisdiction in advisory proceedings is left to the Court's appreciation,[124] and it may not always be practically possible for a court to explore all remote aspects of broad, abstract questions.[125]

[117] Hersch Lauterpacht, *Function of Law in the International Community* (Clarendon 1933) 64.

[118] Hans Kelsen, *Principles of International Law* (Rinehart 1952) 305. See also Lucien Siorat, *Le problème des lacunes en droit international* (LGDJ 1959).

[119] *Oppenheim's* (n 100) §3 (12–13) (emphasis removed).

[120] Alfredo Mordechai Rabello, 'Non Liquet: From Modern Law to Roman Law' (1974) 9 Israel L Rev 63, 63. In civil law traditions, see Code Civil (Civil Code, France) art 4; Codice Civile Italiano (Civil Code, Italy) art 12(2); Schweizerisches Zivilgesetzbuch (Civil Code) art 1(2); Louisiana Civil Code, art 4. In common law traditions, see *Vaughan v Menlove* (1837) 132 ER 490.

[121] See eg Hersch Lauterpacht, 'Some Observations on the Prohibition of "Non Liquet" and the Completeness of the Law' in *Symbolae Verzijl: présentées au professeur J.H.W. Verzijl à l'occasion de son LXXème anniversaire* (Martinus Nijhoff 1958) 200; Ian Brownlie, 'Politics and Law in International Adjudication' (2003) 97 ASIL Proc 282, 285; *Oppenheim's* (n 100) §3(13).

[122] *Nuclear Weapons* (n 63) ¶¶97, 105(E). See generally Daniel Bodansky, 'Non Liquet' in *Max Planck Encyclopedia of Public International Law* (online edn, OUP 2006); Hugh Thirlway, *The Sources of International Law* (2nd edn, OUP 2019) 125–30.

[123] See Susan Breau, 'Low-Yield Tactical Nuclear Weapons and the Rule of Distinction' (2013) 15 Flinders LJ 219.

[124] Statute of the International Court of Justice (26 June 1945, in force 24 October 1945) [1946] UKTS 67, art 65(1); *Western Sahara*, Advisory Opinion (16 October 1975), [1975] ICJ Rep 12, ¶23.

[125] Prosper Weil, 'The Court Cannot Conclude Definitively … Non Liquet Revisited' (1998) 36 Colum J Transnatl L 109, 117.

Admittedly, the prohibition of findings of *non liquet* does not mean that the content of the law is always clear. Complex cases arise in particular with regard to the application of ill-defined customary norms. Like any other legal system, international law involves some techniques to decide hard cases.[126] For instance, the recognition of general principles as a source of law was intended to ensure that judges would always find a legal basis to decide a case.[127] For lack of a better solution, a court may seek to decide a dispute on the basis of 'the principle which it considers … most in conformity with the fundamental principles of international law'.[128] One way or another, 'a decision must be made',[129] and this decision may not be entirely unpredictable.

These observations apply also, of course, in relation to states' obligations on climate change mitigation. Some specific treaty commitments are relatively clear, but they are undemanding and therefore unlikely to be the main focus of legal disputes. By contrast, courts face greater challenges when applying general mitigation obligations that arise from the UNFCCC and customary international law or mitigation obligations that are implied from human rights treaties or multilateral environmental agreements. For instance, to apply the law, a court may have to balance antithetical interpretations of sovereign rights either as allowing economic development and the exploitation of natural resources at the expense of GHG emissions or as prohibiting interference with multiple rights of other states through the emissions of GHGs. In such circumstances, a judge will find no simple and objective method to determine what precisely a state is required to do, but a careful review of judicial practice provides significant insights on the conclusions the judge is most likely to arrive at.

There is no denial that judges exercise, in ordinary practice, a certain degree of appreciation, or discretion, when applying general mitigation obligations.[130] Discretion, however, is not arbitrariness: judicial decisions are constrained and guided by legal norms, and these legal norms can be the object of doctrinal analysis. Although legal doctrine will not provide a comprehensive formula to interpret and apply general mitigation obligations, it may nonetheless help to achieve more consistent judicial decisions, for instance by narrowing down the scope of permissible legal arguments and by clarifying probable applications of these obligations. As such, a doctrinal analysis of the international law on climate change, albeit uneasy, is not completely impossible.

[126] See ibid 118; Vaughan Lowe, 'The Role of Equity in International Law' (1992) 12 Aust YBIL 54.

[127] Lauterpacht, 'Non Liquet' (n 121) 205. See also *Pulp Mills* (n 93) Separate Opinion of Judge Cançado Trindade, ¶¶8–15.

[128] *Mavrommatis Palestine Concessions (Greece v UK)*, Jurisdiction (30 August 1924), PCIJ Rep Series A/B No 2, 16. See also *Boundaries of British and American Northeastern Territories*, Award (10 January 1831), 28 RIAA 33, 42.

[129] *Indus Waters Kishenganga*, Partial Award (n 112) ¶437.

[130] Hart (n 74) 272; Joseph Raz, 'Dworkin: A New Link in the Chain Review' (1986) 74 Cal L Rev 1103.

D. The Objective of this Book

This book presents a doctrinal analysis of the international law on climate change mitigation: it seeks to determine the content of this law as, for instance, courts would apply it. Its focus is on obligations—requirements that are binding under international law. This focus on obligations is not to suggest that the law only creates obligations;[131] it merely reflects the fact that the law on climate change mitigation, as evidenced in the context of litigation, is mainly concerned with (or more naturally framed in terms of) obligations. These obligations apply to legal persons, typically states but also some non-state actors such as international organizations and self-governed territories. Obligations are contrasted with other requirements such as provisions that define objectives or expectations, or express recommendations or encouragements. The breach of an obligation entails international responsibility, and thus involves legal consequences,[132] whereas the non-achievement of other requirements does not have such consequences. Among obligations relating to climate change mitigation, this book focuses on those that retain a general and abstract character (comparable to statutory law in a domestic context), to the exclusion of more transactional obligations typically negotiated between two or a few states (which could be compared with contractual commitments).[133]

Some of the central questions addressed in this book are the following:

- What is the legal nature of the various agreements, decisions, and other instruments intended to promote climate change mitigation? What obligations do they entail, if any, with regard to climate change mitigation?
- What mitigation obligations, if any, arise from customary international law, human rights treaties, and multilateral environmental agreements?
- How do mitigation obligations arising from different sources relate to one another? For instance, do climate treaties preclude the application of obligations arising from general international law? Can one rightly assume that obligations arising from human rights treaties require compliance with other mitigation obligations?

[131] See Oscar Schachter, 'International Law in Theory and Practice' (1982) 178 RdC 9, 25, describing law as 'in essence a system based on a set of rules and obligations'; A Pellet, 'The Normative Dilemma: Will and Consent in International Law-Making' (1988) 12 Aust YBIL 22, 26, noting that the law also defines 'permissions'.

[132] ILC, 'Draft Articles on the Responsibility of States for Internationally Wrongful Acts' [2001] II(2) YBILC 26, arts 1, 28.

[133] For examples of the latter, see Memorandum of Understanding between the Government of the Kingdom of Denmark and the Government of Romania on Co-operation for the Implementation of the Kyoto Protocol to the UN Framework Convention on Climate Change (adopted 28 January 2003, in force 8 December 2004) 2448 UNTS 71; Exchange of notes constituting an arrangement between the Government of the Federal Republic of Germany and the Government of the Republic of Ecuador concerning additional measures for the preservation of forests/biodiversity under the special energy and climate fund (adopted and in force 14 November 2014) 3029 UNTS I-52619.

- What are the nature and content of mitigation obligations, in particular the general mitigation obligations arising from the UNFCCC and customary international law?
- When these obligations appear exceedingly abstract, how can they be applied meaningfully in actual cases? Can a judge assess a state's requisite level of mitigation action implied from its general mitigation obligations? Or else, how can one determine a state's compliance with its general mitigation obligations?

The analysis in this book proceeds in two steps. The first Part of the book identifies international law obligations related to climate change mitigation—obligations arising from specific instruments (such as climate treaties), general international law, and human rights treaties. The second Part analyses the nature of general mitigation obligations and determines specifically what they entail. In particular, it discusses the possibility of assessing a requisite level of mitigation action or assessing implementation of corollary duties of cooperation, vigilance, and consistency.

Three preliminary caveats are in order. First, this book is limited to climate change mitigation (to the exclusion, in particular, of adaptation). It does not discuss international law obligations that constrain the ways states decide and implement mitigation action (eg on public participation and unintended consequences). Its focus is on primary obligations, thus leaving aside any questions relating to the content of state responsibility for any breach of mitigation obligations. Second, this book does not directly address the prospects of litigation as it focuses on the substance of the law rather than on procedures to apply it. The book is informed by a belief that mitigation obligations can be implemented through diplomatic and political processes, domestic litigation, and possibly international adjudication. Yet, the ineffectiveness of these implementation mechanisms would not affect the substance of the analysis, just its relevance.[134] Third, to state the obvious, this book is an academic endeavour, not a work of political advocacy. Its aim is not to promote any cause other than a better collective understanding of international law. The aim is not to determine what the law should be but what it is.

E. Framework of Analysis

This section presents some of the foundations of the analysis developed in the following chapters. More specifically, it outlines the doctrine of sources, introduces

[134] See *Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia v Serbia)*, Judgment (26 February 2007), [2007] ICJ Rep 43, ¶148, recalling 'the fundamental distinction between the existence and binding force of obligations arising under international law and the existence of a court or tribunal with jurisdiction to resolve disputes about compliance with those obligations', and adding: 'The fact that there is not such a court or tribunal does not mean that the obligations do not exist'; Hart (n 74) 83.

the difference between ascending and descending reasoning, and highlights the need for, and challenges to, a systemic interpretation of the law.

1. A Standard Doctrinal Methodology

A tension exists between more or less normative conceptions of doctrinal analysis. At one extreme, seeking to determine what a court *would* likely decide could involve sociological, anthropological, or psychological methodologies rather than the type of inquiries generally associated with doctrinal analysis. At the other extreme, trying to determine what a court *should* decide could lead one to discard many, perhaps most, judicial decisions as wrongly decided, leading to conclusions fundamentally at odds with—hence of limited relevance to—actual judicial practice. Standard doctrinal research seeks to find a balance somewhere between these two extremes. The focus in this book is generally on international law as international courts (in particular the ICJ) claim to interpret it—that is, in line with the prevailing doctrine as reflected in particular by the ILC.

Thus, the book largely embraces the general tenets of positivism, which, as defined by Wolfgang Friedmann, 'accepts posited legal authority, *i.e.*, the commands issued by the supreme authority of the state, as absolutely compelling, and rejects the inquiry into higher moral norms, into the law as it ought to be, as improper for the lawyer'.[135] As such, the book relies on the identification and interpretation of norms of international law on the basis of the formal sources of international law that emanate from the will of states. The analysis builds on a rich corpus of judicial decisions and doctrinal studies on various relevant aspects of international law, and yet it is also hindered by the lack of agreed solutions to some fundamental problems, perhaps most obviously regarding the identification and interpretation of customary international law. It may be useful to highlight here some of the key assumptions that inform the analysis, although these assumptions are arguably based on a standard understanding of the doctrine of sources. Some more specific questions are discussed in other parts of the book.

At the most basic level, states are assumed to be equal sovereigns, which implies that no state or entity can impose its will on other states. Therefore, as the Permanent Court of International Justice (PCIJ) observed in the *Lotus* case, the international law binding upon states must—at least at some level of abstraction—'emanate from their own free will'.[136] On the other hand, states are not free to act as they wish: once they have agreed to a rule, they are bound to comply with it. The

[135] Wolfgang Friedmann, *The Changing Structure of International Law* (Colum UP 1964) 76.

[136] *SS Lotus (France/Turkey)*, Judgment (7 September 1927), PCIJ Rep Series A No 10, 18. See also *Oppenheim's* (n 100) §9, emphasizing that 'the will of individual states does not play an unrestricted role', as illustrated, for instance, in relation to custom or to peremptory norms; James Crawford, *Brownlie's Principles of Public International Law* (8th edn, OUP 2012) 20 (*Brownlie's*).

will of a state to be bound by international norms can be expressed in various ways, ranging from the expressed declaration of consent by an individual state through the ratification of a treaty or the communication of a unilateral declaration, to more diffuse acceptance of customary norms and general principles by states as a group.[137] By contrast, as judicial decisions and legal doctrine do not necessarily reflect the will of states to be bound, they are not sources of international law, even though they provide 'subsidiary means for the determination of rules of law'.[138] Despite the absence of binding precedent in international law, courts frequently rely on previous judicial decisions as persuasive authorities.[139]

With regard to treaties, the analysis will primarily be guided by the customary international law codified in provisions of the Vienna Convention on the Law of Treaties[140] and by the doctrine on the subject.[141] As such, references will primarily be made to the 'ordinary meaning to be given to the terms of the treaty in their context and in light of its object and purpose'.[142] In general, the word 'shall', within a treaty, will be interpreted as indicating an obligation, unless other elements indicate otherwise (eg when 'shall' does not apply to a legal person),[143] whereas 'should' is taken to indicate a requirement that is not legally binding. The analysis will also build, at times, on subsequent practice and agreements between the parties[144] and on multiple authentic versions in different languages.[145]

In line with the prevailing doctrine of sources, the analysis in this book will not generally involve a detailed review of the political negotiations that led to the adoption of relevant instruments (eg *travaux préparatoires*). The main reason for this is that 'the text of the treaty must be presumed to be the authentic expression of the intentions of the parties'.[146] The statements that parties make in the course

[137] ICJ Statute (n 124) art 38(1). See also VCLT (n 113) art 11; League of Nations Advisory Committee of Jurists, *Procès-verbaux of the proceedings of the Committee, 16 June to 24 July 1920* (van Langenhuysen 1920) 335 (Lord Phillimore), describing general principles as 'those which were accepted by all nations *in foro domestico*'; ILC, 'Draft Conclusions on Identification of Customary International Law' in ILC Report, 70th session, A/73/10 (2018) 119, conclusion 2.

[138] ICJ Statute (n 124) art 38(1)(d). See also *Paquete Habana* (1900) 175 US 677, 700; *Brownlie's* 37.

[139] ICJ Statute (n 124) art 59; Mohamed Shahabuddeen, *Precedent in the World Court* (CUP 1996). As such, there is no fundamental difference in the nature of the authority of judgments and individual pronouncements, or between *ratio decidendi* and *obiter dictum*, or contentious decisions and advisory opinions except for what concerns the rights and obligations of the parties to contentious proceedings.

[140] VCLT (n 113) arts 31–33. See also *Immunities and Criminal Proceedings (Equatorial Guinea v France)*, Judgment on Preliminary Objections (6 June 2018), [2018] ICJ Rep 292, ¶91, assessing the customary nature of the rules in arts 31, 32.

[141] See in particular Mark E Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties* (Martinus Nijhoff 2008); Olivier Corten and Pierre Klein, *The Vienna Conventions on the Law of Treaties: A Commentary* (OUP 2011); Richard K Gardiner, *Treaty Interpretation* (2nd edn, OUP 2015); Oliver Dörr and Kirsten Schmalenbach (eds), *Vienna Convention on the Law of Treaties: A Commentary* (2nd edn, Springer 2018).

[142] VCLT (n 113) art 31(1).

[143] See Paris Agreement (n 16) art 4(5), affirming that '[s]upport shall be provided', without specifying who will provide it.

[144] VCLT (n 113) art 31(3).

[145] Ibid art 33.

[146] ILC, 'Draft Articles on the Law of Treaties' [1966] II YBILC 219, 223.

of negotiations do not necessarily qualify their understanding of the final text. As such, the law of treaties limits the recourse to supplementary means of interpretation to situations where authentic means would '[l]eave . . . the meaning ambiguous or obscure' or '[l]ead . . . to a result which is manifestly absurd or unreasonable'.[147] As far as climate treaties are concerned, such ambivalence can frequently be resolved by comparing the equally authentic version in their six languages. At any rate, the cogency of *travaux préparatoires* 'depends on the extent to which they furnish proof of the *common* understanding of the parties as to the meaning attached to the terms of the treaties'.[148] Identifying the common understanding of the parties is a challenging task in relation to any multilateral negotiations, but it is made virtually impossible, with regard to climate treaties, as a result of the absence of any systematic records (eg summary or verbatim) of climate negotiations, the constraints imposed on reporting by civil society organizations, and the fact that much of the negotiations take place in informal settings, not infrequently behind closed doors,[149] whereas statements made beyond the scope of treaty negotiations will not generally be considered as preparatory works.[150]

The application of customary international law faces more daunting challenges. Custom has long been described as a particularly uncertain source of law, sometimes derided as merely a 'matter of taste'[151] which is 'asserted'[152] rather than demonstrated, and remains 'indeterminate and manipulable'.[153] Fernando Tesón, for instance, denounces 'the practice of claiming customary status for rules notwithstanding the fact that these rules cannot be traced back to any plausible rule of recognition'[154]—a phenomenon he considers 'widespread' in academic publications, which he views as really, in effect, 'pieces of advocacy'.[155] These criticisms do not

[147] VCLT (n 113) art 32. See also eg *Conditions of Admission of a State to Membership in the United Nations (Article 4 of the Charter)*, Advisory Opinion (28 May 1948), [1948] ICJ Rep 57, 63, noting the consistent judicial practice 'according to which there is no occasion to resort to preparatory work if the text of a convention is sufficiently clear in itself'. See also *Fisheries Jurisdiction (UK v Iceland)*, Judgment on Merits (25 July 1974), [1974] ICJ Rep 3, ¶12; *Iron Rhine Railway (Belgium v Netherlands)*, Award (24 May 2005), 27 RIAA 35, ¶48.

[148] Humphrey Waldock, Third Report on the Law of Treaties, A/CN.4/167 (1964) 58 (para 21) (emphasis in the original).

[149] See generally Joanna Depledge, *The Organization of Global Negotiations: Constructing the Climate Change Regime* (Earthscan 2005); Naghmeh Nasiritousi and Björn-Ola Linnér, 'Open or Closed Meetings? Explaining Nonstate Actor Involvement in the International Climate Change Negotiations' (2016) 16 Intl Envtl Agreements: Politics, Law and Economics 127.

[150] See Oliver Dörr, 'Article 32' in Dörr and Schmalenbach (eds) (n 141) ¶¶15, 19.

[151] J Patrick Kelly, 'The Twilight of Customary International Law' (1999) 40 Va JIL 449, 451.

[152] Stefan Talmon, 'Determining Customary International Law: The ICJ's Methodology between Induction, Deduction and Assertion' (2015) 26 EJIL 417.

[153] Kelly (n 151) 451. See also Michael Akehurst, 'Custom as a Source of International Law' (1976) 47 BYBIL 1; László Blutman, 'Conceptual Confusion and Methodological Deficiencies: Some Ways That Theories on Customary International Law Fail' (2014) 25 EJIL 529.

[154] Fernando R Tesón, 'Fake Custom' in Brian D Lepard (ed), *Reexamining Customary International Law* (CUP 2017) 86.

[155] Ibid 87.

generally question the fact that custom is a source of international law, but they call for greater methodological caution.

This book builds on a large body of judicial decisions, scholarship, and the work of the ILC, which together outline, if not a complete theory, at least a working method to identify and interpret international custom in a way that is generally consistent with the practice of international courts and tribunals.[156] Accordingly, customary international law can be identified based on evidence of a general practice of states and its acceptance as law (*opinio juris*).[157] However, it is not always practical to conduct a comprehensive survey of state practice and acceptance as law.[158] Courts,[159] scholars,[160] and the ILC[161] recognize the possibility of deducing potential customary norms from broadly accepted premises of the international legal order (eg state sovereignty), at least when such deduction is confirmed by some (albeit incomplete) evidence of state practice and acceptance as law. Judicial decisions, in particular those of international courts and tribunals, are another indication of what courts would likely continue to consider as customary international law.

A question of particular relevance, when international law is applied to climate change mitigation, relates to the legal regime applicable in the absence of clear and specific rules. The PCIJ in the *Lotus* case affirmed that '[r]estrictions upon the independence of States cannot … be presumed'.[162] This sentence has often been misconstrued as suggesting that 'whatever is not *explicitly* prohibited by international law is permitted'.[163] This would, in effect, excludes any prohibition from the scope of customary law, whose norms are never 'explicit'. In fact, the *Lotus* judgment clearly

[156] See in particular Anthea Elizabeth Roberts, 'Traditional and Modern Approaches to Customary International Law: A Reconciliation' (2001) 95 AJIL 757; ILC, 'Customary International Law' (n 137); Orfeas Chasapis-Tassinis, 'Customary International Law: Interpretation from Beginning to End' (2020) 31 EJIL 235.

[157] See *North Sea Continental Shelf (Germany/Denmark, Germany/Netherlands)*, Judgment (20 February 1969), [1969] ICJ Rep 3, ¶77; *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v US)*, Judgment on Merits (27 June 1986), [1986] ICJ Rep 132, ¶207; ILC, 'Customary International Law' (n 137), conclusion 2.

[158] See eg Tesón (n 154) 96.

[159] See eg *Corfu Channel (UK v Albania)*, Judgment on Merits (9 April 1949), [1949] ICJ Rep 4, 35 (identifying 'respect for territorial sovereignty' as 'an essential foundation of international relations … [b]etween independent States'); *Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/US)*, Judgment (12 October 1984), [1984] ICJ Rep 246, ¶111, noting the existence of 'a limited set of norms for ensuring the co-existence and vital co-operation of the members of the international community' and implying that these norms are to be identified by deduction; *Pulp Mills* (n 93) ¶204.

[160] C Wilfred Jenks, *The Prospects of International Adjudication* (Stevens & Sons 1964) 9; Christian Tomuschat, 'Obligations Arising for States without or against Their Will' (1993) 241 RdC 195, 294.

[161] ILC, 'Customary International Law' (n 137) commentary on conclusion 2, ¶5.

[162] *Lotus* (n 136) 18.

[163] Weil, 'The Court Cannot Conclude Definitively' (n 125) 112 (emphasis in original). See also discussion in Helen Quane, 'Silence in International Law' (2014) 84 BYIL 241, 253–60; Alain Pellet, 'Le droit international à la lumière de la pratique: L'introuvable théorie de la réalité' (2021) 414 RdC 9, 130–32.

recognizes the existence of 'implicit' international law obligations.[164] A principle of freedom would have relied on an untenable logic: equal states can have no implicit right to freedom unless they also have a corollary implicit obligation to safeguard the rights of others.[165] As Martti Koskenniemi pointedly observed, '[t]o say that "freedom" should be given preference fails singularly to indicate which State's freedom is meant'[166]—for protecting a state's freedom would often come at the expense of the rights of another state. At any rate, international courts and tribunals have regularly identified state obligations based on general principles despite the absence of clear and specific rules.[167] Therefore, one cannot simply assume that the absence of explicit rules on climate change mitigation implies an unrestrictive freedom to emit GHGs any more than a sovereign right to a stable climate system.

2. Ascending and Descending Reasoning

Another transversal issue relates to the difference between what Koskenniemi calls ascending and descending reasoning in the process of legal interpretation, which corresponds broadly to a distinction between chiefly deductive arguments and chiefly inductive ones. Descending arguments seek to identify legal norms based on 'justice, common interests, progress, nature of the world community or other similar ideas to which it is common that they are anterior, or superior, to State behaviour, will or interest'.[168] By contrast, ascending arguments rely on empirical evidence of state consent or state practice. Koskenniemi's thesis is that these two types of reasoning are not fully reconcilable and that this unsolvable conflict 'provides the dynamics of international legal argument'.[169]

The tension between ascending and descending reasoning raises major issues in the doctrinal analysis of the international law on climate change mitigation. A descending reasoning may suggest that a state must do whatever is necessary to prevent climate change. This could be interpreted in light of states' agreement on collective objectives such as the objective of the Paris Agreement of holding global

[164] See *Lotus* (n 136) 18, recognizing 'usages generally accepted as expressing principles of law' as an (implicit) source of law, and noting 'the first and foremost restriction imposed by international law upon a State … that—failing the existence of a permissive rule to the contrary—it may not exercise its power in any form in the territory of another State'. See also An Hertogen, 'Letting Lotus Bloom' (2015) 26 EJIL 901.

[165] See *Nuclear Weapons* (n 63) Dissenting Opinion of Judge Shahabuddeen, 393; Lauterpacht, *Function of Law* (n 117) 94–96; Alain Pellet, 'Lotus que de sottises on profère en ton nom! Remarques sur le concept de souveraineté dans la jurisprudence de la Cour mondiale' in *L'État Souverain dans le Monde d'Aujourd'hui: Mélanges en l'Honneur de Jean-Pierre Puissochet* (Pedone 2008) 221; Evan J Criddle and Evan Fox-Decent, 'Mandatory Multilateralism' (2019) 113 AJIL 272, 291.

[166] Martti Koskenniemi, *From Apology to Utopia: The Structure of International Legal Argument* (CUP 2006) 45.

[167] See eg *Corfu Channel* (n 159) 22; *Nuclear Weapons* (n 63) ¶29.

[168] Koskenniemi (n 166) 59.

[169] Ibid 60.

warming 'well below' 2°C, or close to 1.5°C, above pre-industrial temperatures.[170] Yet, from an ascending perspective, it appears that states have neither consented to acting consistently with these temperature targets, nor is their general practice in line with these targets. To the contrary, states have recognized that their current NDCs, in aggregate, are not consistent with what they consider to be a necessary level of global efforts.[171] There is therefore a wide gap, in the international law on climate change mitigation, between what Koskenniemi calls apology and utopia—between what states do and what, in their own recognition, ought to be done.

This book seeks to predict how a court (in particular, an international court or tribunal) would interpret and apply the law in light of the standard doctrine of sources. As evidenced above, the positivist tenets of this doctrine point mainly to ascending reasoning—on empirical evidence of state consent.[172] Yet, scholars and judges are not entirely dismissive of the possibility of relying on rigorous deductive reasoning based on well-established legal principles, at least to define presumptions that are then to be tested against empirical evidence.[173] For instance, courts have inferred, from general principles of international law (presumably the principle of sovereign equality), states' obligations to exercise due diligence to protect the rights of other states,[174] to maintain vigilance in environmental matters,[175] to cooperate,[176] to prevent transboundary environmental harm,[177] to conduct EIAs before approving projects liable to cause such harm,[178] and to notify and consult in good faith with state that may be affected by such harm.[179] Such inferences were frequently presented with little, if any, discussion (or even assertion) of state practice,[180] but none of these findings went clearly against settled state practice. Descending reasoning appeared to be used to fill the gap left when state practice was incomplete or inconsistent, but never to impose norms that were clearly incompatible with consistent state practice.[181]

[170] Paris Agreement (n 16) art 2(1)(a). See *Urgenda* (SC) (n 59) ¶7.2.1. But see Benoit Mayer, 'Temperature Targets and State Obligations on the Mitigation of Climate Change' (2021) 33 JEL 585.

[171] See n 58.

[172] See n 135.

[173] See Georg Schwarzenberger, 'The Inductive Approach to International Law' (1947) 60 Harv LR 539, 566–67; Jenks (n 160) 627; Tomuschat (n 160) 303–05; ILC, 'Customary International Law' (n 137) commentary on conclusion 2, ¶5.

[174] *Corfu Channel* (n 159) 22.

[175] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment (25 September 1997), [1997] ICJ Rep 7, ¶140.

[176] *MOX Plant (Ireland v UK)*, Order on Provisional Measures (3 December 2001), [2001] ITLOS Rep 95, ¶82.

[177] *Pulp Mills* (n 93) ¶101.

[178] Ibid ¶204.

[179] *Certain Activities* (n 94) ¶104.

[180] See Rudolf H Geiger, 'Customary International Law in the Jurisprudence of the International Court of Justice: A Critical Appraisal' in Ulrich Fastenrath and others (eds), *From Bilateralism to Community Interest: Essays in Honour of Bruno Simma* (OUP 2011) 673; Talmon (n 152).

[181] *Certain Activities* (n 94) Separate Opinion of Judge Donoghue ¶¶3, 13. On the lack of practice on prevention and environmental assessment, see John H Knox, 'The Myth and Reality of Transboundary Environmental Impact Assessment' (2002) 96 AJIL 291; Brunnée, 'Procedure and Substance' (n 89) 151.

Following these general observations, the following chapters rely mostly on ascending reasoning, with the difficulties this implies to ascertain general state practice. The analysis refers at times to descending reasoning, in line with judicial practice, but only for simple deductions from unquestionable premises of the international legal order (mainly the principle of sovereign equality) and only as a complement to ascending reasoning. On the other hand, this book does not rely on descending reasoning that is directly contradicted by state practice.

3. Relationships between Obligations

Multiple obligations on climate change mitigation arise from treaties and custom as part of what Nico Krisch elegantly called a 'dazzlingly multifaceted regime complex'.[182] To make sense of these obligations, one needs to situate them as part of a system of norms and, more specifically, to acknowledge the meaningful relationships between them: norms applicable to the same subject matter (eg climate change mitigation) do not merely coexist; inevitably, they also interact.[183] Understanding these interactions—in particular those between specific instruments (eg climate treaties) and general norms (eg customary international law)—is essential to a comprehensive and consistent understanding of international law as it applies to climate change mitigation.

This book's analysis is informed, in particular, by the principle of harmonization, identified by the ILC Study Group on the fragmentation of international law, according to which, 'when several norms bear on a single issue, they should, to the extent possible, be interpreted so as to give rise to a single set of compatible obligations'.[184] Accordingly, one norm on climate change mitigation (eg a treaty commitment) cannot simply be assumed to exclude the application of any other norm (eg a customary norm). Such could not be the case unless one norm either expressed or implied the will of states to exclude the application of the other norm on the same subject matter.[185] However, climate treaties neither contain any provision nor reflect any intention of their parties with the effect of excluding the application of customary international law.[186] To the contrary, the Preamble to the UNFCCC reaffirms principles of customary international law,[187] while several states have expressly stated their understanding that climate treaties do not derogate from

[182] Nico Krisch, 'The Decay of Consent: International Law in an Age of Global Public Goods' (2014) 108 AJIL 1, 18.

[183] ILC, 'Conclusions of the Work of the Study Group on the Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law' [2006] II(2) YBILC 179, ¶1.

[184] Ibid ¶4.

[185] ILC, 'Draft Articles on the Responsibility of States' (n 132) commentary on art 55, ¶4.

[186] See below at 115.

[187] UNFCCC (n 8) Preamble ¶¶8–9.

general principles of customary international law.[188] Therefore, to use the terminology of the ILC's Study Group, there is no 'relationship of conflict' *stricto sensu* (ie incompatibility) between climate treaties and customary international law but rather a 'relationship of interpretation' whereby 'one norm assists in the interpretation of another'.[189]

This relationship of interpretation implies neither identity nor complete independence. On the one hand, international courts and tribunals have interpreted norms applicable to the same subject matter as creating separate obligations, which may differ, for instance, in nature and scope.[190] In relation to climate change mitigation, an ascending reasoning does not exclude the relevance of customary international law, nor does it suggest that customary norms are less stringent than treaty rules. In fact, the general agreement among states necessary for the emergence of customary law is in some respects an easier condition than the consensus required for the adoption of substantive decisions under the UNFCCC regime,[191] and it is more immediately reflective of states' evolving understanding of their obligations than climate treaties—as such, it would not be particularly surprising if customary law, even when identified through purely ascending reasoning, imposed more demanding obligations than climate treaties.

On the other hand, norms may be relevant to identify or interpret one another, whether it is as part of the context in light of which a norm is to be interpreted[192] or as constituting some of the state practice and acceptance from which customary norms arise.[193] Thus, the following chapters suggest that NDCs can be viewed as a minimal benchmark to determine the content of states' general mitigation obligations under the UNFCCC and customary international law, even though the implementation or achievement of NDCs, by itself, does not demonstrate a state's compliance with its general mitigation obligations.[194] On the other hand, the mitigation obligations implied by human rights treaties or multilateral environmental

[188] See the declarations made by Fiji, Kiribati, Papua New Guinea, and Tuvalu in connection with the UNFCCC, by the Cook Island, Kirabati, Nauru, and Niue in connection with the Kyoto Protocol, and by the Cook Islands, the Marshall Islands, Micronesia, Nauru, the Solomon Islands, Tuvalu, and Vanuatu in connection with the Paris Agreement.

[189] ILC, 'Conclusions on Fragmentation' (n 183) ¶2. See also Yamin and Depledge (n 71) 13. See also below at 119.

[190] See *Paramilitary Activities* (n 157) ¶178; *MOX Plant* (n 176) ¶50; *Proceedings Pursuant to the OSPAR Convention (Ireland/UK)*, Final Award (2 July 2003), 23 RIAA 59, ¶141. See also Institut de Droit International, 'Resolution: Problems Arising from a Succession of Codification Conventions on a Particular Subject' (1995) 66 Ann Inst Droit Intl 245, conclusion 10.

[191] On the inability of the COP to agree to a departure from the default rule of consensus, see UNFCCC, Draft Rules of Procedure of the Conference of the Parties and its Subsidiary Bodies, FCCC/CP/1996/2 (22 May 1996), rule 42; UNFCCC, Report of the Conference of the Parties on its Twenty-Fifth Session, FCCC/CP/2019/13, ¶¶4–5.

[192] See VCLT (n 113) art 31(3); Campbell McLachlan, 'The Principle of Systemic Integration and Article 31(3)(C) of the Vienna Convention' (2005) 54 ICLQ 279.

[193] See RR Baxter, 'Multilateral Treaties as Evidence of Customary International Law' (1965) 41 BYBIL 275; ILC, 'Customary International Law' (n 137) conclusion 11.

[194] See below at 121 and 312.

agreements are distinct from the general mitigation obligations under the UNFCCC and customary international law—the former can only require compliance with the latter if, and inasmuch as, in the circumstances of the case at issue, mitigation action effectively promotes the protection of the human rights or environmental resources at issue.[195]

4. Concepts and Terminology

The analysis in this book involves distinctions between various types of international law obligations on climate change mitigation. Two alternative typologies are used to reflect how obligations differ in terms of source, on the one hand, and of nature and content, on the other.

With regard to sources, a distinction is drawn between customary obligations arising from general acceptance and obligations arising from express consent. Among the latter, a further distinction is made between commitments on climate change mitigation and obligations implied from other (eg human rights) treaties.

- *Customary obligations*. Customary international law includes obligations of particular relevance to climate change such as the obligation of a state to protect the rights of other states,[196] to prevent transboundary environmental harm,[197] and to cooperate in protecting global environmental resources.[198] More specifically, there is an increasing amount of evidence of state practice and acceptance as law of a general obligation to mitigate climate change.[199] These obligations must be interpreted with caution: a standard cannot be found to be customary if more than a few states systematically ignore it or deny its existence. Customary obligations do not require a state to do more than others usually do; they merely prevent a state from breaking ranks.[200]
- *Commitments*. A mitigation commitment is an obligation, originating directly from a state's consent, which aims more or less directly at fostering mitigation action. Climate treaties are the main source of commitments, although some can be created through unilateral declarations or by relevant developments under other treaty regimes (eg the ozone regime). Commitments can be obligations of result[201] or obligations of conduct;[202] they can be broad or

[195] See below at 161.
[196] See eg *Corfu Channel* (n 159) 22.
[197] See eg *Trail Smelter (US/Canada)*, Award of 11 March 1941, 3 RIAA 1938, 1965; *Nuclear Weapons* (n 63) ¶29; *Pulp Mills* (n 93) ¶101; *Certain Activities* (n 94) ¶104; *South China Sea (Philippines v China)*, Award (12 July 2016), 31 RIAA 153, ¶941.
[198] See eg UN Charter (n 61) art 56; Rio Declaration (n 63) principle 7; *MOX Plant* (n 176) ¶82.
[199] See below at 110.
[200] But see *Urgenda* (SC) (n 59).
[201] See eg Kyoto Protocol (n 40) art 3(1).
[202] See eg Paris Agreement (n 16) art 4(2), second sentence.

specific. For instance, they range from the general commitments of the parties to the UNFCCC, to implement unspecified measures to mitigate climate change,[203] to far more procedural commitments to communicate NDCs[204] and national inventories.[205] Commitments are distinguished from pledges in that the former are legally binding while the latter are not.[206]

- *Implied obligations*. Some mitigation obligations may be derived from instruments that were not negotiated specifically to promote climate change mitigation. A case in point is treaties on human rights and environmental protection, which impose on states an obligation to protect individuals or resources. When these individuals and resources are liable to be affected by the impacts of climate change, these treaties may imply an obligation to make efforts to mitigate climate change. Yet, these implied obligations do not necessarily require full compliance with commitments or customary obligations on climate change mitigation; in fact, they only open a narrow window on the applicability of general mitigation obligations.[207]

Two other concepts are used to distinguish between obligations according to their nature and content: general mitigation obligations and their corollary duties.

- *General mitigation obligations*. A general obligation on climate change mitigation is an obligation of conduct (or due diligence), requiring the implementation of appropriate measures and, more generally, an appropriate level of effort, in order to mitigate climate change.[208] Albeit highly abstract, the concept is central to the international law on climate change mitigation. General mitigation obligations arise from customary international law and from the general substantive provisions of the UNFCCC.[209] Obligations implied from human rights and environmental treaties are of a similar nature (as obligations of conduct), but their content differs as they involve lower standards of due diligence for what concerns climate change mitigation. In principle, general mitigation obligations imply a requisite level of mitigation action, but a judicial determination of this requisite level of mitigation action faces major practical challenges.[210] An alternative way of applying general mitigation obligations relies on the identification of corollary duties.[211]

[203] UNFCCC (n 8) art 4(1)(b), 4(2)(a).
[204] Paris Agreement (n 16) art 4(2), first sentence.
[205] UNFCCC (n 8) art 12(1)(a).
[206] See eg Bodansky, 'New Hope?' (n 88) 297.
[207] See below at 128–179.
[208] See below at 90.
[209] UNFCCC (n 8) arts 4(1)(b), 4(2)(a). See below at 38.
[210] See below at 227–280.
[211] See below at 213.

- *Corollary duties*. General mitigation obligations, as obligations of conduct, involve the implementation of necessary and other appropriate measures. Corollary duties are the requirements to implement such measures so that the breach of a corollary duty demonstrates (when the duty relates to a necessary measure) or at least suggests (when the duty relates to another appropriate measure) that the state is not complying with its general mitigation obligations. This book identifies three main corollary duties—the duties of cooperation, vigilance, and consistency—and some of their more concrete applications.[212] The word 'duty' is used to distinguish these requirements from discrete obligations originating directly from sources of international law.[213] By contrast with what applies to a discrete obligation, the breach of a corollary duty does not directly entail international responsibility, although it suggests a possible violation of the general obligation from which the duty is inferred, which can result in more extensive remedial obligations than the breach of a discrete obligation.

F. Structure of the Book

The book is organized into two Parts that explore first the identification then the application of obligations on climate change mitigation.

1. Identification of Mitigation Obligations

The three chapters that constitute the first Part of this book identify three types of mitigation obligations: commitments, customary obligations, and obligations implied from human rights treaties.

Chapter II identifies mitigation commitments—the obligations to which states consent directly and specifically with the aim of fostering mitigation action. The main commitments are created by climate treaties, namely, the UNFCCC, the Kyoto Protocol, and the Paris Agreement. In particular, the UNFCCC creates general commitments to implement mitigation action, whereas the Paris Agreement requires states to take the necessary measures to achieve their NDCs. Other commitments arise from unilateral declarations, including possibly some NDCs. Finally, some other treaty regimes define specific commitments in the context of international efforts to protect the ozone layer or to regulate pollution from international aviation and shipping.

[212] See 281–320.

[213] The content of corollary duties may coincide with that of discrete obligations, for instance, the obligation to cooperate under the UN Charter or the discrete customary obligation to conduct EIAs.

Annex 540

"The Strasbourg Principles of International Environmental Human Rights Law – 2022", *Journal of Human Rights and the Environment,* 2022

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The Strasbourg Principles of International Environmental Human Rights Law – 2022

CONTEXT

The Strasbourg Principles were drafted by a group of human rights and environmental law experts who were brought together by the Conference 'Human Rights for the Planet' held in 2020 at the European Court of Human Right in Strasbourg and by the present Special Issue of the Journal of Human Rights and the Environment.*

The Strasbourg Principles of International Environmental Human Rights Law are a uniform restatement of general principles that have emerged in international human rights law in the context of the environment. They are intended to be used by judges and other legal professionals engaged in international litigation of environmental matters.

PREAMBLE

Deeply concerned by the severe adverse human rights consequences of environmental harm and disasters caused by loss of biological diversity, depletion of natural resources, land system change, environmental pollution, including noise, air, water, soil, chemical and plastic pollution, as well as by climate change;

Recognising that nature has an intrinsic value that does not depend on its utility to humans;

Recognising that the protection of human rights and the rule of law in a democratic society is vital for effective environmental protection;

Considering that every State and international institution, every person, natural or legal, public or private, has the duty to respect and to take care of the environment by contributing with their best efforts to the conservation, protection and restoration of the integrity of the Earth's climate and ecological systems;

Recognising that, in light of the clear and growing scientific evidence, a state of environmental emergency exists and that urgent action is required of all actors, including national courts and international human rights organs that should expediently process environmental claims brought before them;

The following general principles of international environmental human rights law are stated therein to assist courts, lawyers and litigants:

CAUSES AND HUMAN RIGHTS EFFECTS OF ENVIRONMENTAL DEGRADATION AND CLIMATE CHANGE

The following assertions are based, *inter alia*, on rulings of superior national courts, the European Court of Human Rights and the Inter-American Court of Human Rights; on

* The Strasbourg Principles are not a document prepared by the European Court of Human Rights and they do not represent any official position of the European Court of Human Rights or the Council of Europe.

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reports of the United Nations High Commissioner for Human Rights and of the Special Rapporteur on Human Rights and the Environment, as well as on scientific assessment reports of the United Nations Intergovernmental Panel on Climate Change and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

1. Environmental degradation and climate change are having negative impacts on the effective enjoyment of human rights.

2. Exposure to pollution of air, water or soil and exposure to noise can have serious detrimental effects on human health and human well-being, in that pollution can cause various forms of quantifiable harm to physical and/or mental health and/or make humans more vulnerable to physical or mental illness, as well as to social inequalities.

3. The main causes of climate change are anthropogenic emissions of greenhouse gases causing global warming. Climate change has and will continue to have profound adverse environmental and societal impacts. As to its effects on humans, climate change is likely to cause, *inter alia*, death, injury, harm to physical and mental health, the spread of infectious diseases, an increase in human mobility, including enforced displacements, and to cause disrupted livelihoods, land alterations, property damage, changes in temperature and weather patterns affecting food security, scarcity of natural drinking water, loss of ecologically and culturally relevant fauna, flora, and loss of traditional knowledge.

4. While it is impossible to predict the precise temperatures at which specific effects adverse for humans will occur, the risk of such effects occurring is materially increased as temperatures rise. Once certain tipping points are reached, global warming is potentially irreversible.

5. The main causes of the loss of biological diversity are anthropogenic. These include: climate change; fragmentation and destruction of forests and other habitats; overexploitation of lands and oceans; chemical and plastic pollution; exposure to hazardous substances; invasion of alien species; as well as overexploitation of natural resources and species. As to the effects on humans, biodiversity loss is likely significantly to disrupt provisioning, regulating, cultural and supporting ecosystem services, encompassing benefits that humans derive from wild nature and from the managed environment.

HUMAN RIGHT TO A SAFE, CLEAN, HEALTHY AND SUSTAINABLE ENVIRONMENT

6. A safe, clean, healthy and sustainable environment is a precondition for the full enjoyment of the whole range of civil, political, social, economic, cultural and solidarity rights. All human rights are universal, indivisible and interdependent – based on the recognition of the dignity of the human being.

7. Everyone has a right to a safe, clean, healthy and sustainable environment adequate for their health, well-being, dignity, culture and flourishing (right to a safe, clean, healthy and sustainable environment).

8. The right to a safe, clean, healthy and sustainable environment is an autonomous right. It operates either as an explicit right that is enacted in a legal act, or as an implicit right that can be derived, *inter alia*, from the following human rights: right to life; right to dignified life; prohibition of degrading and inhuman treatment; right to personal integrity; right to respect for private and family life and for home; right to property; prohibition of discrimination; peoples' right to self-determination; right to health; right to food; right to water; and right to progressive development.

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9. The right to a safe, clean, healthy and sustainable environment has two interconnected dimensions. In its subjective anthropocentric dimension, it recognises that nature has a preconditional utility for humans. In its objective ecocentric dimension, it also acknowledges the intrinsic value of nature, as such.

10. The right to a safe, clean, healthy and sustainable environment comprises substantive and procedural elements. Its substantive element includes, but is not limited to, a right to clean air, to clean water and sanitation, to healthy food, to healthy ecosystems, to safe climate and to a non-toxic environment. In its procedural limb, it comprises the right of access to information, to participation in decision-making processes and of access to justice in environmental matters.

VICTIM

11. For the purposes of international environmental human rights litigation, the notion of a victim of a human rights violation is to be interpreted autonomously and irrespective of domestic rules such as those concerning interest in or capacity to take action. The term 'victim' ought to evolve in the light of conditions in contemporary society and be applied without excessive formalism.

12. For the purposes of legal standing, where applicable, the term 'victim' denotes the person or persons directly, indirectly or potentially affected by the alleged violation. For the purposes of environmental human rights litigation, direct victims include persons who would have a valid personal – including diffuse – interest in seeing a violation brought to an end. Potential victims are persons to whom the violation would cause harm in a foreseeable and not too distant future.

13. By way of exception to the general rule, if applicable, where the alleged victims of a human rights violation are not in a position to assert on their own, adequately, or in time, their individual rights, a non-governmental organisation for the protection of the environment, is, in principle, entitled to pursue a legal action based on the human rights of those victims.

14. A non-governmental organisation for the protection of the environment is, in principle, entitled to allege a violation of its own civil right to receive and to impart information, its right to participate in decision-making processes and its right to have access to justice in environmental matters.

HARM

15. In the context of environmental harm, the fundamental principles of international environmental law, including, but not limited to, the principles of prevention and precaution, constitute a framework of interpretation for international human rights law.

16. For the purposes of environmental human rights litigation, it is sufficient to show that the harm complained of, whether past, present or future, is such as to produce a tangible effect on the alleged victim's human rights.

17. For the purposes of environmental human rights litigation, where the harm complained of has not yet materialised, substantial grounds must be shown to the effect that the alleged victim or a group of victims face a real and not too remote risk of having his, her or their human rights tangibly affected. It is enough to establish a sufficiently close

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link between the applicant's individual human rights and the risks of serious harm to the environment and/or of the dangerous effects of an activity or omission.

18. In the event of scientific uncertainty, even in the absence of official documentary support, a sufficiently close link may be established through a combination of indirect evidence or by a presumption drawn from serious, specific and consistent facts and/or based on statistical correlation.

19. For the purposes of environmental human rights litigation, the adverse effects of environmental harm on an alleged individual victim must attain a certain minimum level of severity. The assessment of that minimum must take into account all the circumstances of the situation – taken cumulatively – such as, but not limited to, the intensity and duration of the causal agent, and its physical or mental effects. The general context of the environmental emergency must also be taken into account. The fact that, as it may be, the environmental harm occurs in the context of an environment that is already degraded, must not be seen as diminishing the severity of its adverse effects on a person's human rights, including on the autonomous right to a safe, clean, healthy and sustainable environment.

20. As regards the right to respect for private and family life, and for home, serious environmental harm may affect individuals' well-being and prevent them from enjoying their homes in such a way as to affect their private and family life adversely, even if their health is not endangered. Where it is not established that the victim's health had deteriorated solely because of his or her exposure to a particular source of pollution, it may be accepted that the pollution in question inevitably made the applicant more vulnerable to various health disorders.

21. As regards the right to life, serious environmental pollution that exceeds domestic or international legal standards in a significant or protracted manner must be understood as endangering life.

22. For the purposes of environmental human rights litigation, there is a presumption that pollution or nuisance that exceeds limits that are binding on the State concerned becomes potentially harmful to the well-being, the health or the lives of those exposed to that pollution or nuisance. The same presumption should apply, even if such limits are not exceeded, where the victim lives within a sanitary, buffer or otherwise designated danger zone, or where domestic authorities order resettlement.

23. An activity's compliance with emissions or other relevant national or international statutory standards should not automatically entail a finding that the minimum threshold of severity was not met.

BURDEN OF PROOF

24. For the purposes of environmental human rights litigation, alleged victims must present prima facie evidence that they have either suffered the harm or face a real risk of harm affecting their human rights.

25. Where the cause of the alleged harm is an activity or omission that lies within the responsibility or oversight of a public authority, including activities carried out by private actors, the burden shifts to the State to produce convincing evidence to show that there is no harm to the alleged victim's human rights. The same applies, *a fortiori*, where pollution or nuisance exceeds the limits which are binding on a State concerned or where the alleged dangerous activity or omission has been found to breach its permit conditions or the statutory regulations applicable in the country in question.

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APPLICABILITY OF HUMAN RIGHTS TREATY PROVISIONS

26. In the context of international environmental human rights litigation and the applicability of provisions such as the right to have access to a court, where an enforceable right to a safe, clean, healthy and sustainable environment is recognised – at least on arguable grounds – in national law, physical or legal persons who have sought judicial review of planning, policy or permitting decisions concerning the environment are, in principle, entitled to rely on the right to have access to a court. The same holds true where a right to bring a public-interest court action in an environmental matter, is recognised – at least on arguable grounds – in national law.

27. Where applicable, a non-governmental organisation for the protection of the environment must be able to rely on the protection of human rights where there is a sufficient link between the 'civil right' which the association is claiming and its right to enable the public to be informed, to participate in the decision-making process and to have access to justice in environmental matters.

28. Pursuant to the doctrines of dynamic and harmonious interpretation (known also as the principle of systemic integration), human rights treaties must be interpreted in their normative context, in particular in the light of the corpus of international environmental law.

EXTRATERRITORIAL JURISDICTION FOR TRANSBOUNDARY ENVIRONMENTAL HARM

29. The exercise of jurisdiction arises where a State of origin has effective control over the activity that caused or that risks causing transboundary damage to the environment and the consequent human rights harm to persons outside its territory where the alleged harm suffered by the victims was reasonably foreseeable to the State of origin at the time of its acts or omissions.

EXHAUSTION OF DOMESTIC REMEDIES

30. In the context of international environmental human rights litigation, for the purposes of the requirement of exhaustion of domestic remedies, where applicable, public interest litigation by a non-governmental organisation for environmental protection – if recognised under national law as a means of defending the interests of the alleged victims – exempts, in principle, the alleged victims from bringing their own domestic proceedings, if that litigation sufficiently corresponds to their individual situation.

BALANCING OF INTERESTS

31. Protection of the environment constitutes a general interest of a pressing and urgent priority that is fundamental to the protection of core human rights. As such, measures of environmental protection are not subservient to economic interests of a State or of an individual, or, even to certain fundamental rights. A mere reference to the economic well-being of the country must not be accepted as sufficient to outweigh the rights of others affected by environmental harm.

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32. In environmental matters, States' assessment of whether an interference with the rights of others is necessary in a democratic society, must, as a minimum: (i) be informed by appropriate environmental investigations and studies; (ii) ensure the timely and effective participation of the public; (iii) be guided by the principles of intergenerational equity, prevention, precaution and *in dubio pro natura* ('when in doubt, in favour of the environment'); (iv) not regress from established standards of environmental protection; and (v) be guided by the recognition of the existing environmental and climate emergency.

33. In environmental matters States have, in principle, a narrow margin of appreciation in determining the steps to be taken to ensure compliance with their human rights obligations.

STATES' HUMAN RIGHTS OBLIGATIONS

34. Human rights violations by States can occur whether environmental harm or risk of thereof is caused by the State's own actions or omissions, or by the activities or omissions of private actors where the State has failed to guarantee rights in accordance with its duties to regulate, monitor and, if applicable, sanction those activities.

35. States are under the obligation to ensure, for the benefit of present and future generations, as well as for the benefit of the environment itself, that everyone within their jurisdiction can: (i) enjoy safe, clean, healthy and sustainable environmental conditions adequate for their right to health, well-being, dignity and culture, and (ii) can effectively fulfil a duty to respect and to take care of the environment.

36. States have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

37. Ensuring the quality of the environment which is adequate for everyone's health, well-being, dignity, culture and flourishing is a shared international responsibility. It follows that every State has an obligation of international cooperation to ensure a safe, clean, healthy and sustainable environment, including avoiding dangerous interference with the climate system.

38. States that are not parties to existing international legal frameworks on environmental protection must urgently become Parties to such frameworks, as well as elaborate and implement corresponding national legal measures to the fullest extent of their capacity to do so. Parties to international environmental treaties and agreements must take all the necessary measures to ensure timely and effective compliance of their national environmental laws with international environmental treaties and agreements.

39. States' positive obligations, whether to ensure the right to a safe, clean, healthy and sustainable environment or other human rights, must include appropriate and adequate measures of mitigation of and adaptation to climate change; measures of effective protection, preservation, improvement and restoration of the environment; as well as measures of sustainable use of natural resources.

40. The standard of conduct of a State in the context of environmental human rights obligations is one of 'due diligence'. Public authorities must act with due diligence to avoid a real and foreseeable risk to the enjoyment of human rights, resulting from environmental degradation or climate change of which they have or ought to have knowledge. A State is obliged to use due diligence to avert foreseeable impacts and, in so far as it is impossible to avert them completely, to do everything reasonable to limit the impacts.

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41. Where there is a risk of serious or irreversible impacts on human rights, States cannot rely on scientific uncertainty as a reason for postponing the adoption of effective and proportionate measures to prevent environmental degradation or to mitigate or adapt to climate change.

42. States' actions and decisions that affect the environment must ensure environmental justice and cannot result in discrimination or inequality.

43. States must ensure the timely and effective participation of the public in planning, policy, permitting and regulatory decisions concerning environmental matters. States must respect the public's procedural and participatory rights as provided for by international treaties or as derived, *inter alia*, from the autonomous right to a safe, clean, healthy and sustainable environment, as well as from the right to freedom of expression, the right to freedom of assembly, the right to life, the right to personal integrity, the right to respect for private and family life and home, and the right to property. The public's procedural and participatory rights comprise the right of access to information, the right to participate in decision-making and the right to have access to justice in environmental matters. They also include the right not to be persecuted, penalised or harassed for seeking to exercise these rights. States must combat impunity by conducting prompt, impartial and independent investigations and pursuing accountability for all attacks and threats by State and non-State actors against any environmental human rights defender or any person affiliated with any such defender.

44. In order to inform the views of the public as to whether States' laws, plans and policies regarding the environment are to be considered effective and appropriate, States are under a duty to draw up and to make publicly available at an early stage the drafts of such laws, plans and policies for the public's comments. Policies and plans must have a sufficient degree of specificity, that is to say, they must give real and sufficient detail as to how they are intended to achieve the national goals in relation to climate change and environmental protection.

45. States must take all necessary measures to ensure that independent environmental impact assessments are conducted prior to any decisions to authorise or to engage in a project, an activity, a plan, or a programme likely to have an adverse impact on the environment within and, if relevant, beyond the national territory. Environmental impact assessments, which should contain accessible, gender-responsive and disability-inclusive information, must contain a non-technical summary so as to ensure sufficient accessibility to the public.

46. Where environmental harm is caused by a State or non-State actor, States must ensure, by all means at their disposal, an adequate response – judicial or otherwise – so that the legislative and administrative framework set up to protect the right to a healthy environment and related human rights is properly implemented and any breaches of those rights are curtailed and punished.

47. Where lives were lost or endangered by environmental harm and in the particular context of dangerous activities, States must carry out an official criminal investigation capable of establishing the complex phenomena that might have caused an incident and of identifying and prosecuting those responsible.

REDRESS

48. In the event of a violation of human rights in the context of environmental damage, a State responsible for the violation is under an obligation: (i) to cease the act or omission giving rise to a violation, if such act is continuing; and (ii) to implement guarantees of non-repetition, if circumstances so require.

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49. The responsible State is under an obligation to make reparation in accordance with its obligations under the human rights treaty in question, which may take the form of restitution (ie restoration, ecological remediation), compensation and measures of satisfaction, either singly or in combination.

50. The preferred and principal measures of redress (rehabilitation and restitution) ordered by courts should be: (i) preventive measures – in the event of risk of damage and (ii) ecological remediation and restoration – in the event of past damage.

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Annex 541

K. Schmalenbach, *States Responsibility and Liability for Transboundary Environmental Harm*, in CORPORATE LIABILITY FOR TRANSBOUNDARY ENVIRONMENTAL HARM: AN INTERNATIONAL AND TRANSNATIONAL PERSPECTIVE, eds. K. Schmalenbach et al. (Springer, 2023), pages 43-60

Peter Gailhofer · David Krebs ·
Alexander Proelss ·
Kirsten Schmalenbach ·
Roda Verheyen *Editors*

Corporate Liability for Transboundary Environmental Harm

An International and Transnational Perspective

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Preface

The content of this book was prepared between autumn 2018 and autumn 2021 in the course of an extensive research project commissioned by the German Environment Agency. The project was managed by the Öko-Institut in Berlin and implemented in collaboration with Geulen und Klinger Rechtsanwälte (Berlin), Rechtsanwälte Günther (Hamburg), Professor Dr. Kirsten Schmalenbach (University of Salzburg) and Professor Dr. Alexander Proelß (University of Hamburg).

The conception of the chapters and their content goes back, in large part, to the original design of the research project requested by the German Environment Agency. The authors are particularly indebted to the project supervisor there, Dr. Dana Ruddigkeit, whose selection and formulation of many research questions, both broad and specific, proved to be extremely clear-sighted and invaluable for the project as a whole. Indeed, the value of this contribution became increasingly obvious to the entire research team as we addressed the many legal developments that took place during the course of the project.

A number of meetings and discussions in the team preceded and accompanied the project's implementation and added significantly to the robustness of the final results. Further in this regard, the reviews of the commissioning institutions, the German Environment Agency and the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety also played an important role for the project teams' debates and final results. Expert reviews from a large number of colleagues from academia and practice who commented on and discussed individual aspects of project content during several expert workshops in April 2021, provided invaluable input, too. The authors owe a great debt of gratitude to all those who contributed to these workshops. The authors also would like to thank the anonymous reviewers who provided valuable advice in the run-up to publication.

Finally, the authors are deeply indebted to our colleagues in the back offices of the participating institutions, who supported the extensive revision of the final report for book publication: Inse Warich, Sara Wissmann, Frederik Seng and Ian Silver, who did the copy editing, have all added in some way to the work presented here, without their support this publication would not have been possible. Of course, a volume of

this size and complexity carries an inherent risk of erring in some manner despite the best efforts of all involved, however, the responsibility for any mistakes and errors lies with the editors and authors.

The Editors

Berlin, Germany — Peter Gailhofer
Berlin, Germany — David Krebs
Hamburg, Germany — Alexander Proelss
Salzburg, Austria — Kirsten Schmalenbach
Hamburg, Germany — Roda Verheyen

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States Responsibility and Liability for Transboundary Environmental Harm

Kirsten Schmalenbach

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3.1 Introductory Remarks

As discussed in Chapter 2 (Chap. 2 ¶ 20 (Sect. 2.2.2)), one strategy to address environmental degradation caused by transnational human activities is to focus on States as the principal actors and law-makers on the international plane. In order to address environmental challenges, States have by and large three avenues for 1

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regulatory management at their disposal: the first one is domestic legislation on pollution control and conservation within the boundaries of jurisdictional limits set by international law (Chap. 7); the second avenue is action through regional organisations of economic integration which have the power of supranational law-making, although these also have to observe the same jurisdictional limits in relation to the international community; and the third avenue is traditional international law-making, the method on which this Chapter focuses.

2 As far as international law is concerned, States can explicitly agree or tacitly acquiesce to an extensive variety of international approaches to prevent and address transboundary environmental harm. Within the framework of recognised sources of international law, States may impose not only on themselves, as international persons, but also on domestic public and private actors, international environmental obligations of conduct and result. Any breach of these legal obligations then triggers consequences for the duty holder to make reparations for the environmental harm caused (¶ 64 *et seq*). In addition to this, States may agree on their own duty or, as the case may be, on the duty of domestic public and private actors to provide financial compensation for transnational environmental damage solely because the damage occurred and was caused by certain activities or omissions of a given duty holder (¶ 68 *et seq*). The obligations of States of origin to compensate an environmentally affected State for transboundary environmental harm emanating from the former's territory necessarily and exclusively arises from international law as the sovereign equality of States prevents domestic law from regulating inter-State relations. In contrast, the obligation to compensate owed by domestic public and private actors which have caused transboundary harm can either be directly established by international rules or these rules impose on States the duty to implement corresponding liability rules in their domestic legal orders (Chap. 5, ¶ 7 *et seq* (Sect. 5.2)).

3.2 Conceptual Distinction Between State Responsibility and State Liability

3 The above categorisation differs between the duty to make financial compensations because of a breach of international environmental rules and the duty to compensate because of the occurrence of transboundary environmental damage. Colloquially, both categories can be referred to as environmental liability, however, international legal usage of the term 'liability' has developed its own distinct meaning, primarily on account of the International Law Commission (ILC).

4 The ILC introduced the conceptual distinction between State responsibility and State liability in its early reports on the law of State responsibility, specifically in a report entitled "International Liability for the Injurious Consequences of Acts not

Prohibited by International Law".[1] While the responsibility concept enshrined in the 2001 Articles on State Responsibility (ASR) refers to the legal consequences of a wrongful act attributable to a State, the ILC utilised the term 'liability' to denote the State's obligation to provide reparation for damage that arises from lawful activities. Even though it is safe to say that academia has gradually espoused the ILC's approach,[2] it still faces some valid criticism.[3] Most importantly, the ILC's narrow definition of State liability was driven by the Commission's own conceptual needs and deliberately set aside other international and domestic usages of the term. Taking Article 139(2) UNCLOS as an example, the provision stipulates that damage caused by a failure of a State party to carry out its responsibilities under this part shall entail liability (Chap. 13).[4] Another example is the usage of the term liability in civil liability conventions, where it refers to obligations in private law, such as operators' liability under national law for any damage they cause in other States (Chaps. 6 and 7). Most notably, in domestic law, the term liability is often regarded as an equivalent of the term responsibility.[5]

Drawing a conceptual distinction between responsibility and liability is not only open to challenge with respect to general usage, it also conveys the impression there is a clear dividing line between State responsibility and State liability, however, any such line can be easily blurred, as is exemplified by the *Trail Smelter case*. **5**

Trail Smelter Case (the United States v Canada) **6**

The 1941 Trail Smelter Award[6] is a landmark decision that highlighted for the first time the limits of State sovereign rights to allow its territory to be used for any form of environmentally significant activities with cross-border impacts. The origins of Trail Smelter date back to the late nineteenth century when a Canada-based corporation began operating a smelter plant that emitted

(continued)

[1] Report of the International Law Commission on the Work of its Thirty-Seventh Session, UN Doc A/40/10 (1985), para. 108-163; Draft Articles on International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law, UN Doc A/CN.4/423 (1989).

[2] But see Orrego Vicuña, Eighth Commission of the Institute de Droit International, 1997, Resolution on Responsibility and Liability under International Law for Environmental Damage, Article 4 "Responsibility for Harm Alone", available at https://www.idi-iil.org/app/uploads/2017/06/1997_str_03_en.pdf, last accessed 25 April 2022.

[3] de la Fayette (1997), p. 322.

[4] Accordingly, the Seabed Dispute Chamber of ITLOS, in its Advisory Opinion, ITLOS *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* (Advisory Opinion), 1 February 2011, ITLOS Reports 2011, 10, para. 178, speaks of liability under customary international law within the meaning reflected in Article 2 ASR.

[5] *Preliminary Report of SR Quentin-Baxter on international liability for injurious consequences arising out of acts not prohibited by international law*, 28 July 1980, UN Doc A/CN.4/334, para. 12.

[6] PCA *Trail Smelter Case* (United States v Canada) (1941) 3 RIAA 1905.

hazardous fumes (sulphur dioxide) that caused damage to plant life, forest trees, soil and crop yields across the border in Washington State in the United States (US). In 1935, the US and Canada agreed on establishing an arbitral tribunal which, in its first decision (1938) decided that harm had occurred between 1932 and 1937 and ordered the payment of US$78,000 as the "complete and final indemnity and compensation for all damage which occurred between such dates". The Tribunal's second decision (1941) was concerned with the final three questions presented by the 1935 agreement between the US and Canada, namely, the latter's responsibility for as well as appropriate mitigation and indemnification of future harm. The Tribunal landmark conclusion with respect to future harm stated that: "(U)nder the principles of international law (. . .) no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence".[7]

7 The Trail Smelter Award's legacy has been the subject of a wealth of academic writing[8] and had a handful of subsequent manifestations, most notably in Principle 21 of the 1972 Stockholm Declaration and Principle 2 of the 1992 Rio Declaration.[9] Irrespective of these modern manifestations, there is still some academic debate about the proper understanding of the Trail Smelter Award, particularly whether it addresses Canada's international liability or its international responsibility.[10] The core of the original dispute lies in the fact that the smelter's activity, processing of lead and zinc ore, did not violate international law. Consequently, the issue of Canada's responsibility or liability depends on the point of reference for the legal assessment: If a primary rule of customary environmental law obliges States to prevent or mitigate transboundary industrial emissions occurring within their territory (duty to prevent), Canada is responsible for infringing this obligation and accordingly has to make reparations to the USA whose territory is significantly affected. However, if the focus is on the smelting activity, which is not prohibited under international law, Canada would only be liable for the significant

[7] PCA *Trail Smelter Case* (United States v Canada) (1941) 3 RIAA 1905.

[8] See e.g. Bratspies and Miller (2006), Craik (2004), pp. 139–164, Read (1963), Mickelson (1993).

[9] Report of the Stockholm Conference UN Doc A/CONF.48/14, at 7, reprinted in International Legal Materials (1972) 1420; Rio Declaration on Environment and Development, UN Doc A/CONF.151/26 (Vol. 1), reprinted in International Legal Materials (1992), p. 874.

[10] See e.g., Brownlie (1983), p. 50: State Responsibility—including the *Trail Smelter Case*—is concerned with categories of lawful activities (i.e. smelting) which have caused harm; see also Ellis (2006), p. 56.

environmental damage on US territory.[11] The existence of such liability would stem from a primary rule of international law, namely the duty to pay damages, that stipulates the polluter-pays principle whereby the one who creates the risk to others has to bear the costs (¶ 38 *et seq*; Chap. 5).[12] In contrast, a State's responsibility for any breach of the primary environmental duty to prevent significant transboundary harm from happening falls within the category of secondary rules of international law.

8 Although the Trail Smelter Arbitration Panel decided on the dispute well before the ILC introduced its conceptual distinction between State responsibility and State liability, the wording of the 1941 award points towards Canada's responsibility for transboundary environmental harm. This responsibility was triggered by the violation of Canada's primary obligations under international law to both not cause transboundary harm and to take measures to prevent actors under its jurisdiction from doing so ("no State has the right to use or permit to use its territory. . ."),[13] The damages that Canada had to pay to the United States were therefore the consequence of Canada's international responsibility because it breached its duty to prevent the harmful activities of the privately-owned smelter.[14] In the 7th recital of its 2006 draft principles on the allocation of loss, the ILC explicitly acknowledges that States bear responsibility when infringing their obligations under international law to prevent harmful activities and reserves the liability for transboundary harm to all cases that do not involve State responsibility.[15]

9 It is beyond the scope of this book to thoroughly examine the terminological confusion and disputes involving the terms liability and responsibility,[16] especially since the underlying conceptual decision of the ILC is not mandatory as illustrated by the language of international treaties and ICJ jurisprudence.[17] Undeniably, State responsibility and State liability are closely related and even intrinsically interconnected.[18] Given this book's focus on corporate liability, it utilises the term liability to denote any duty to pay monetary compensation for damage (Chap. 2 ¶ 36 *et seq* (Sect. 2.3)). The legal prerequisites of this obligation do not stem from the term liability but from the applicable legal instrument. In conformity with international usage, State responsibility is reserved exclusively for the purpose of denoting

[11] Liability was the initial approach of the ILC to transboundary environmental harm, see Boyle (2010), p. 96, see ILC Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities, YBILC 2006 II/2.

[12] de la Fayette (1997), p. 325.

[13] Drumbl (2006), p. 86.

[14] PCA *Trail Smelter Case* (United States v Canada) (1941) 3 RIAA 1905.

[15] ILC Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities, with commentaries (2006). YBILC Vol. II, Part Two, UN Doc A/61/10, at 61.

[16] Crawford (2013), p. 63.

[17] See e.g., ICJ Fisheries Jurisdiction (Federal Republic of Germany v Iceland) Merits, Judgment, ICJ Reports 1974, 175, 208: ". . .the Court was merely asked to indicate the unlawful character of the acts and to take note of the consequential liability of Iceland to make reparation."

[18] Sucharitkul (1996).

the legal consequences of an internationally wrongful act that consists, *inter alia,* of States' obligation to redress any damage incurred (Article 36 ASR). Consequently, this study refers to State liability only when discussing the legal obligation to pay damages that do not fall within the scope of Article 36 ASR (¶ 44 *et seq*).

3.3 Potential Sources of International Environmental Liability

10 It is a truism that international environmental law, including its liability and compensation rules, stems from the same legal sources as other areas of international law.[19] It is equally true that a mere reference to the traditional legal sources mentioned in Article 38(1) ICJ Statute provides an incomplete picture of the relevant legal sources of international environmental law. While international environmental law is not unique in terms of the legal sources available to it, like other areas of international law, it has its own particularities concerning the function of certain sources and methods of identifying the law produced by them. As *Jutta Brunnée* observed: "(I)nternational environmental law is a relatively pragmatic discipline, focused on problem-solving, including through alternative standard-setting modes and compliance mechanisms"[20]. Notably, the legal relevance of nonbinding instruments is especially high in international environmental law;[21] their successful reconfirmation by international actors and authorities over time often significantly contributes to the formation and identification of international law stemming from traditional sources, which will be outlined below.

3.3.1 Multilateral Environmental Agreements and Environmental Liability

11 As of February 2022, the International Environmental Agreements (IEAs) Database Project, developed and maintained by the University of Oregon, lists 1414 Multilateral Environmental Agreements (MEAs).[22] MEA is the generic term for a treaty, convention, protocol or other binding instrument related to the environment and

[19] Birnie et al. (2009), p. 14.

[20] Brunnée (2017), p. 961.

[21] Friedrich (2013), pp. 143–170.

[22] International Enviromental Agreements (IEAs) Database Project (2002–2020), available at https://iea.uoregon.edu/iea-project-contents, last accessed 25 April 2022.

concluded between more than two parties.[23] While there is a significant number of MEAs in force, only a small fraction of them address the question of liability for environmental damage.

Statistics: Multilateral Environmental Agreements with liability elements **12**

State liability: 2 MEAs, both in force

1. Convention on International Liability for Damage Caused by Space Objects[24], in force, (Chap. 11);
2. arguably Article 7(2) 1997 UN Convention on the Law of the Non-navigational Uses of International Watercourses, in force, (¶ 27).

State liability that is triggered by a breach of an international obligation, i.e. state responsibility: 2 MEAs, both in force:

1. UNCLOS (Chap. 13);
2. Fish Stocks Agreement.

Civil liability regimes: 13 MEAs of which four are in force[25], (Chap. 5) for details

1. Convention on Third Party Liability in the Field of Nuclear Energy;
2. Convention on the Liability of Operators of Nuclear Ships;
3. Vienna Convention on Civil Liability for Nuclear Damage;
4. International Convention on Civil Liability for Oil Pollution Damage, replaced by the 1992 Protocol;
5. Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources;
6. Convention on the Regulation of Antarctic Mineral Resource Activities;
7. Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty;
8. Convention on Civil Liability for Damage Caused During Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels;
9. Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment;

(continued)

[23] UNEP, Glossary of Terms for Negotiators of Multilateral Environmental Agreements, 2007, at 63.

[24] This is not an MEA *per se* but relates to the environment of private and public property damaged by a space object.

[25] In force for the States parties are the Convention on Third Party Liability in the Field of Nuclear Energy of 29th July 1960, the Vienna Convention on Civil Liability for Nuclear Damage, the International Convention on Civil Liability for Oil Pollution Damage and the International Convention on Civil Liability for Bunker Oil Pollution Damage.

10. Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea;
11. Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal;
12. Convention on Civil Liability for Bunker Oil Pollution Damage;
13. Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters.

Administrative liability regime: 1 MEA

1. Nagoya - Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, in force, for details, (Chap. 14);

Provisions in MEAs on the future development of administrative or civil liability rules in international law: 17 MEAs all but one[26] of which are in force, however, only one has led to the adoption of a Protocol[27]:

1. Article 235(3) UNLCOS;
2. Article X Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matters;
3. Article 15 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter;
4. Article 14 Convention on Biological Diversity;
5. Article 27 Cartagena Protocol on Biosafety to the Convention on Biological Diversity (implemented);
6. Article 25 Convention on the Protection of the Marine Environment of the Baltic Sea Area;
7. Article 16 Convention for the Protection of the Mediterranean Sea Against Pollution;
8. Article XIII Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution;
9. Article XIII Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment;
10. Article 14 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region;

(continued)

[26] Not in force: The Convention for Cooperation in the Protection and Sustainable Development of the Marine and Coastal Environment of the Northeast Pacific.

[27] Article 27 Cartagena Protocol on Biosafety to the Convention on Biological Diversity was implemented through the Nagoya - Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety.

11. Article 15 Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region;
12. Article 15 Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region;
13. Article 20 Convention for The Protection of the Natural Resources and Environment of the South Pacific Region;
14. Article 29 Framework Convention for the Protection of the Marine Environment of the Caspian Sea;
15. Article XXIV African Convention on the Conservation of Nature and Natural Resources;
16. Article 13 Convention for Cooperation in the Protection and Sustainable Development of the Marine and Coastal Environment of the Northeast Pacific (not in force);
17. Article 12 Convention to Ban the Importation into the Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region.

Provisions in MEAs on national rules addressing damage: 4 MEAs, all of which are in force:

1. Article 235(2) UNCLOS;
2. Article 12 Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety;
3. Article XVI Convention on the Protection of the Black Sea Against Pollution;
4. Article 11 Convention for the Protection of the Marine Environment and Coastal Area of the Southeast Pacific

Exclusion of liability: arguably 2 MEAs, both of which are in force:

1. para 51 of Decision 1/CP.21 adopting the Paris Agreement (Chap. 16);
2. footnote to Article 8(f) Convention on Long-Range Transboundary Air Pollution.

The above table shows that many MEAs introducing liability rules are not yet in force or that their provisions on the development of an international liability regime remain unimplemented. Taken in isolation, these observations have legal significance for each treaty regime, its effectiveness to prevent environmental degradation and the cost allocation in cases of environmental damage. However, when considered in the broader context, the number of MEAs with liability provisions, the total number of signatory States and, ultimately, the willingness of States to ratify these **13**

MEAs are of importance to the overall picture of environmental liability rules which includes those of a customary law nature.

3.3.2 Customary International Law and Environmental Liability

14 Being a legal source independent of conventional law, customary international law has the potential to bridge geographic and thematic gaps in existent and future MEAs. ILC Special Rapporteur *Michael Wood* wrote in the commentary to the draft conclusions on the identification of customary international law: "(T)reaties that are not yet in force or which have not yet attained widespread participation may also be influential in certain circumstances, particularly where they were adopted without opposition or by an overwhelming majority of States."[28] The observation that broad participation in the adoption of a treaty text (Article 9 VCLT) can contribute to the identification of customary international law as was supported by the ICJ in *Continental Shelf*. In this case, the ICJ considered UNCLOS a reflection of customary international law given that it was adopted by 117 States even though it had not yet entered into force, something which only occurred in 1994, some nine years after the *Continental Shelf* judgment.[29] However, this case is rather special as the ICJ could rely on centuries of practice in the use of the high seas. In addition, the role of unratified treaties for customary international law is only one aspect of many that have to be taken into consideration when identifying the rules of customary international law.

Identification of Rules of Customary International Law

15 The search for rules of customary international law is often characterised by a desire to find a specific international rule to address what is perceived as a critical gap in the law. Accordingly, much has been written about methodological sound approaches to establishing what is customary international law, including the ILC in its 2018 draft conclusion on the identification of customary law.[30] A starting point for all such approaches is Article 38(1)(b) ICJ Statute which takes "international custom, as evidence of a general practice accepted as law". However, this does not specify what counts as evidence for practice and *opinio iuris*, what a viable ratio between the two elements should be, how consistent incidents of practice have to be and how rapidly they may lead to legal development. From a methodological point

[28] ILC Draft Conclusions on the Identification of Customary International Law, 2018, Conclusion 11, para. 3, YBILC 2018 Vol II Part 2, UN Doc A/74/10 at 144.

[29] ICJ *Continental Shelf* (Libyan Arab Jamahiriya v Malta) [1985] ICJ Rep 13, para. 27.

[30] ILC Draft conclusions on Identification of Customary International Law, YBILC 2018 Vol II Part 2, UN Doc A/74/10.

of view,[31] the question is then whether or not the identification of customary international law requires inductive reasoning, i.e. empirically established instances of State practice and legal conviction (*opinio iuris*) over time which, when taken as a whole, create customary international law. Alternatively, customary international law could allow for deductive reasoning, the starting point of which is a general and abstract principle from which rules of customary international law are deduced.[32] This value-based approach puts UN General Assembly resolutions and other non-binding instruments with a certain amount of authority ('soft law') at the centre of their identification process. Even if the ICJ itself does not always work with methodical transparency, there is no denying that the Court predominantly follows the inductive approach to customary international law which emphasises the international law-making process, with State practice and *opinio iuris* related thereto.[33] That said, in *North Sea Continental Shelf* the ICJ hinted at the possibility that the strength of either State practice or *opinio iuris* may make up for the weakness of the other.[34] Nevertheless, the ICJ considers the lack of sufficient State practice or conflicting State practice as detrimental to "the authority of a general rule of international law."[35] Despite the ICJ' obvious methodological preference, there are instances of the Court using deductive reasoning to identify a rule of customary law based on logical and functional imperatives, most notably in the *Arrest Warrant* case.[36]

The traditional inductive approach to customary international law does not render acts of international organisations, the existence of adopted but unratified treaties and universal declarations as irrelevant. They are commonly discussed as evidence of *opinio iuris*, the psychological element of the two components forming customary **16**

[31] See Schwarzenberger (1947), pp. 539 *et seq*; Sauer (1963), pp. 121 *et seq*; Bos (1984), pp. 218 et seq; Kirchner (1992), pp. 215 *et seq*.

[32] Schüle (1959), p. 146.

[33] For a summary of the relevant ICJ jurisprudence see ICL Draft conclusions on identification of customary international law, 2018, YBILC 2018, Viol II part 2.

[34] ICJ *North Sea Continental Shelf Cases* (Federal Republic of Germany v Denmark, Federal Republic of Germany v the Netherlands) [1969] ICJ Rep 3, para. 74: "Although the passage of only a short period of time is not necessarily, or of itself, a bar to the formation of a new rule of customary international law on the basis of what was originally a purely conventional rule, an indispensable requirement would be that within the period in question, short though it might be, State practice, including that of States whose interests are specially affected, should have been both extensive and virtually uniform in the sense of the provision invoked."

[35] ICJ *Fisheries Case (United Kingdom v Norway)* [1951] ICJ Rep 131. However, in the *Nicaragua Case* the court backpedaled from this position stating that it is deemed "sufficient that the conduct of states should, in general, be consistent with such rules and that instances of state conduct inconsistent with a given rule should generally have been treated as breaches of that rule, not as indications of the recognition of a new rule." See ICJ *Military and Paramilitary Activities in and against Nicaragua* (Nicaragua v US) [1986] ICJ Rep 14, para. 98.

[36] ICJ *Arrest Warrant of 11 April 2000* (Democratic Republic of the Congo v Belgium) [2002] ICJ Rep 3, para. 54; see Talmon (2015), p. 418.

international law.[37] This has been widely discussed and accepted, including the ICJ,[38] with respect to General Assembly Resolutions and final documents adopted at large-scale UN conferences, most notably the 1972 Stockholm Declaration and the 1992 Rio Declaration. However, soft law instruments reflecting progressive *opinio iuris* will easily be outweighed by conservative, or even regressive, State practice as the ICJ noted in the *Nuclear Weapon* Case:

> The emergence, as *lex lata*, of a customary rule specifically prohibiting the use of nuclear weapons as such is hampered by the continuing tensions between the nascent *opinio iuris* on the one hand, and the still strong adherence to the practice of deterrence on the other.[39]

17 This traditional understanding of customary law is often accused of not adequately responding to pressing global challenges.[40] Consequently, there is broad and, at times, inventive academic debate on how the process of forming customary international law can be accelerated, simplified and altered to meet the needs of specialised branches of international law such as environmental law or human rights law.[41] One proposed method is to merge the two elements into one category by considering occurrences such as the verbal claims of relevant entities as both *opinio iuris* and State practice.[42] The International Law Association argued in 2000 that resolutions of intergovernmental organisations are a form of State practice, viewing them as "a series of verbal acts by the individual member States participating in that organ."[43] The ILC concurred in its commentary on draft conclusion 6 of its 2018 draft conclusions on the identification of customary law. In para 2 draft conclusion 6 itemises these different forms of practice by stating:

> Forms of State practice include, but are not limited to: diplomatic acts and correspondence; conduct in connection with resolutions adopted by an international organization or at an intergovernmental conference; conduct in connection with treaties; executive conduct, including operational conduct 'on the ground'; legislative and administrative acts; and decisions of national courts.[44]

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[37] Friedrich (2013), p. 145.

[38] ICJ *Military and Paramilitary Activities in and against Nicaragua* (Nicaragua v US) [1986] ICJ Rep 14, para. 188.

[39] ICJ *Legality of the Threat or Use of Nuclear Weapons* [1996] ICJ Rep 226, para. 73.

[40] de Visscher (1956), p. 472: "It cannot be denied that the traditional development of custom is ill suited to the present pace of international relations"; Kolb (2003), p. 128: "...the time has come to put à plat the theory of custom and to articulate different types (and thus elements) of it in relation to different subject matters and areas."

[41] See e.g., D'Amato (1998); Charlesworth (1998).

[42] Akehurst (1974), p. 10.

[43] International Law Association, London Conference (2000), Committee on Formation of Customary (General) International Law, Final Report of the Committee, Statement of Principles Applicable to the Formation of General Customary International Law, Section 11 at 19.

[44] ICL Draft Conclusions on Identification of Customary international Law with Commentaries, 2018, YBILC 2018, Vol II Part 2, UN Doc A/73/10 at p. 133.

According to the ILC commentary, the phrase "conduct in connection with resolutions adopted by an international organization" includes acts by States related to the negotiation, adoption and implementation of resolutions, decisions and other acts adopted within international organisations. This observation is of special importance in areas of international law which are distinguished by highly active specialised organisations, as typical in the area of international environmental law. However, the ILC emphasised[45] that no form of practice has *a priori* primacy over another in the identification of customary international law, which makes the identification process a holistic endeavour. **18**

The non-exclusive list provided by draft conclusion 6 para 2 supports a generous understanding of State practice. In addition, it is to a certain extent an invitation to see both State practice and *opinio juris* in even a single, legally non-binding resolution of an international organisation that enjoyed wide support from member States. The same argument can be made when State representatives adopt a treaty text at an international conference. Voting in favour of a resolution, or failing to object, can be seen as a form of evidence that States accept the resolution's content as reflecting law (*opinio iuris*, cf. para 2 of draft conclusion 10). However, this interpretation of approval ignores the fact that States are well aware of which forums and what language indicate the non-binding status of a document. With regard to the adoption of a treaty text to consider a positive vote, or the failure to object, an incident of both State practice and *opinio iuris* disregards the legal significance of acts such as parliamentary approvals, formal ratifications and reservations in the later stages of the treaty-making process. Therefore, the ILC considered it necessary to make a clear negative statement with regard to the impact of legally non-binding resolutions, namely that they cannot in and of themselves create a rule of customary international law.[46] That said, even if non-binding instruments or treaties that did not attract sufficient ratifications (so-called 'failed treaties') do not form customary international law in and of themselves, they are not without legal significance: the possibility remains that the legal and policy approaches expressed in these instruments will shape the future practice of States when the growing need for urgent action in areas such as environmental law necessitates the use of on-hand solutions. **19**

No-Harm Rule and Environmental Liability

Despite the accelerated push for environmental action seen thus far in the twenty-first century, the main pillar of customary environmental law, the no-harm rule, dates to a bygone era. Having its origin in the 1941 *Trail Smelter* award (¶ 6), the undisputed and fundamental rule imposes primary environmental obligations on States that are the source of significant environmental harm. The violation of the no-harm rule triggers the international responsibility of the harming State, including its duty to provide monetary compensation for the transboundary harm caused **20**

[45] ICL Draft Conclusions on Identification of Customary International Law with Commentaries, 2018, YBILC 2018, Vol II Part 2, UN Doc A/73/10 at p. 133 para. 1.

[46] Draft Conclusions on Identification of Customary International Law with Commentaries, 2018, YBILC 2018, Vol II Part 2, UN Doc A/73/10, Resolution 12 para. 1.

(Article 36 ASR). In keeping with the conceptual distinction introduced by the ILC, the no-harm rule is a primary environmental obligation and, as such, cannot be classed as a rule on State liability (¶ 3 *et seq*).

21 The 1941 Trail Smelter Award highlighted the two facets of the no-harm rule it put in place, namely that States have a 'negative obligation' to refrain from actively causing significant harm to the environment of another State and their 'positive obligation' to prevent other, usually private actors[47] under their jurisdiction, from doing so. [48] However, the award's distinction between a State's obligation "not to cause harm", conceived as an absolute prohibition, and its duty "to prevent harm" caused by others, which is a due diligence obligation, has become blurred in the ICJ's jurisprudence. The Advisory Opinion entitled Legality of the Threat or Use of Nuclear Weapons illustrates the ICJ's approach to avoid conceptually distinguishing between polluting actors and rather include both public and private sources of pollution under the prevention principle. In contemplating the use of nuclear weapons by States, the Court observed: "The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or areas beyond national control is now part of the corpus of international law relating to the environment."[49] This comprehensive prevention approach, which has since been adopted by other international tribunals[50] and the ILC Draft Articles on Prevention,[51] has consequences for State obligations concerning their own environmentally harmful activities: each State's obligations under the prevention principle are those of conduct not of result, even if the State itself is the polluter. In other words, in a case involving transboundary environmental damage caused by a State's activities, that State may escape its international responsibility if it can demonstrate that State authorities have complied with all due-diligence obligations required under international law when permitting such activities.

22 Today it is widely recognised as a customary international rule that States are duty-bound to prevent, reduce and control the risk of environmental harm to other States and, according to the ICJ,[52] to areas beyond State jurisdiction (global commons).[53] These preventive obligations require States to act with due diligence, which

[47] In addition to private actors, this 'positive obligation' to prevent transboundary harm would extend to curtailing the activities of foreign states that have, for example, armed forces present in the state's territory or international organisations operating within that state (e.g. the UN).

[48] Cf. PCA *South China Sea Arbitration* (Philipines v China) (2016) 33 RIAA 1, para. 941.

[49] ICJ *Legality of the Threat or Use of Nuclear Weapons* [1996] ICJ Rep 226, para. 29.

[50] PCA *Arbitration regarding the Iron Rhine ('Ijzeren Rijn') Railway* (Belgium v Netherlands) (2007) 27 RIAA 35, para. 222.

[51] ILC Draft Articles on Prevention of transboundary Harm from Hazardous Activities, 2001.

[52] ICJ *Legality of the Threat or Use of Nuclear Weapons* [1996] ICJ Rep 226, para. 29.

[53] Birnie et al. (2009), pp. 143–152.

means that they have to take the appropriate amount of care to avoid and, if necessary, address transboundary harm through necessary action. The ICJ does not treat due diligence as a one-size-fits-all standard under international law but requires the application of a subject-matter specific due diligence standard.[54] Consequently, one has to consult the environment-centred ICJ cases to obtain insights into the understanding of the international standard of care required under the duty to prevent environmental damage. In *Pulp Mills*, the ICJ noted that particular care is required when implementing obligations in the field of environmental protection due to the irreversibility of some environmental harm, i.e. the due diligence standard becomes more demanding in correlation to the expected permanence of the harm.[55] Then again, a State is required to use 'all means at its disposal' to prevent environmental harm, which underlines that the standard of care is context-specific for both the environmental risk entailed and the actual capacities of the State concerned.

23 A State's obligation to prevent transboundary pollution consists of two subcomponents, namely procedural obligations and substantive obligations. A State's procedural obligations involve risk management before any potentially harmful activities start. In *Certain Activities and Construction of a Road*, the ICJ observed: "(T)o fulfil its obligation to exercise due diligence in preventing significant transboundary environmental harm, a State must, before embarking on an activity having the potential adversely to affect the environment of another State, ascertain if there is a risk of significant transboundary harm, which would trigger the requirement to carry out an environmental impact assessment."[56] An environmental impact assessment (EIA) includes a description of possible damage containment measures,[57] the implementation of which then falls within the categories of the States' substantive obligations.

24 A State's substantive obligations require enacting appropriate damage prevention and containment measures, such as taking needed regulatory and administrative steps[58] which, when exercised, exonerate it from international responsibility even if the measures diligently taken were not successful (obligation of conduct).[59] Which measures are appropriate will depend on several factors and may vary. In contrast, procedural obligations are quite specific about what is required for 'appropriate' risk

[54] MacDonald (2019), p. 1045.

[55] ICJ *Pulp Mills on the River Uruguay* (Argentina v Uruguay) [2010] ICJ Rep 14, para. 185–187.

[56] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) *and Construction of a Road in Costa Rica along the San Juan River* (Nicaragua v Costa Rica) [2015] ICJ Rep 665, para. 104.

[57] Cf. Annex II of the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991).

[58] ICJ *Pulp Mills on the River Uruguay* (Argentina v Uruguay) [2010] ICJ Rep 14, para. 101; ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) *and Construction of a Road in Costa Rica along the San Juan River* (Nicaragua v Costa Rica) [2015] ICJ Rep 665, para. 115.

[59] Mayer (2018), p. 132.

management. Domestically this includes the diligent execution of preliminary risk assessment and, if required due to the identified risk, an EIA. Internationally, procedural obligation after a risk has been identified includes providing notification to as well as consultations and negotiations with any potentially affected States.[60] If States fail to take these steps, they are internationally responsible for the violation of their procedural obligations irrespective of whether any transboundary harm has occurred.[61] Accordingly, procedural obligations are obligations of result with respect to the required actions but are still classed as obligations of conduct with respect to the transboundary environmental harm. If the latter occurs even though a State has taken all the appropriate procedural and substantive measures, that State is not internationally responsible for any resultant transboundary harm and thus does not have to compensate those affected for environmental damage.

25 The point of discussion then is whether it falls within the scope of the customary no-harm rule that States have domestic laws in place that will enable claimants situated in an affected State to take action seeking damages against public or private polluters in cases of transboundary environmental harm. The assumption of such a duty is not completely far-fetched, especially as liability rules can have preventive effects (Chap. 2). This is further highlighted by the Institut de Droit International's 1997 resolution on responsibility and liability under international law for environmental damage which states in its preamble: "*Realizing* that both responsibility and liability have in addition to the traditional role of ensuring restoration and compensation that of enhancing prevention of environmental damage."[62] Based on these preventive traits, it could be argued that the availability of national liability provisions and their cross-border accessibility is a part of the substantive limb of States' preventive due-diligence obligations, alongside their duty to enforce their administrative damage containment measures.[63]

26 The ICJ is not driven by such utilitarian considerations when fleshing out the different aspects of the customary no-harm rule. In *Pulp Mills*, the ICJ observed with regard to EIAs that they are:

[60] Duvic-Paoli (2018), p. 168.

[61] Indicated by ICJ *Pulp Mills on the River Uruguay* (Argentina v Uruguay) [2010] ICJ Rep 14, para. 204: Am EIA "may" be considered to be a requirement under general international law and, in this case, is separate from due diligence as is indicated by the word "moreover"; differentiation is not as clear as in ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) *and Construction of a Road in Costa Rica along the San Juan River* (Nicaragua v Costa Rica) [2015] ICJ Rep 665, para. 104; on this issue see Brunnée (2021), p. 275.

[62] Institut de Droit International, Responsibility and Liability under International Law for Environmental Damage, 4. September 1997 (IDI Resolution), available at https://www.idi-iil.org/app/uploads/2017/06/1997_str_03_en.pdf, last accessed 25 April 2022; see on the details of the IDI Resolution (Sect. 5.6).

[63] Given that national liability rules do not inform about a state's decision to authorise any given project as planned, the extension of such liability rules' scope to include transboundary environmental harm cannot mean they are then classed as procedural obligations under the no-harm rule.

> a practice, which in recent years has gained so much acceptance among States that it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource.[64]

To date, there is no comparable international judicial ruling on domestic liability legislation as a part of States' due-diligence obligations. In contrast to the detailed procedural obligations identified by the ICJ, no substantive core obligations under the no-harm rule have yet been authoritatively identified. However, this does not call into question the existence of these core obligations, including States' duty to have not only administrative control mechanisms but also civil liability rules in place.

In keeping with the methods for the identification of customary rules (¶ 15 *et seq*), liability legislation can only be regarded as a core obligation under the no-harm rule if it can be established that States accept liability and compensation as an indispensable element of prevention. However, this is difficult to substantiate as Article 7(2) of the 1997 UN Convention on the Law of the Non-navigational Uses of International Watercourses exemplifies.[65] Whereas para. 1 of the provision captures the essence of the no-harm rule, para. 2 turns to the question of compensation in cases where States diligently tried to prevent harm but failed to achieve the desired result. Only the occurrence of significant harm triggers a conditioned obligation to "discuss" compensation at the intergovernmental level "where appropriate", which may well result in a no-compensation outcome. **27**

1997 UN Convention on the Law of the Non-navigational Uses of International Watercourses, in Force Since 2014 with 37 States Parties **28**

Article 7(1) Watercourse States shall, in utilizing an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse States.

(2) Where significant harm nevertheless is caused to another watercourse State, the States whose use causes such harm shall, in the absence of agreement to such use, take all appropriate measures, having due regard for the provisions of articles 5 and 6, in consultation with the affected State, to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation.

Civil liability conventions also do not demonstrate that States consider liability provisions a necessary component of their preventive due-diligence obligations. Such conventions stipulate an operator's strict liability in cases involving environmentally ultra-hazardous activities (Sect. 5.3) which, in short, requires neither intention nor negligence to incur liability. Given that such an operator cannot escape **29**

[64] ICJ *Pulp Mills on the River Uruguay* (Argentina v Uruguay) [2010] ICJ Rep 14, para. 204.

[65] Convention on the Law of the Non-navigational Uses of International Watercourses, 2999 UNTS 77.

liability, even if all the precautionary and protective measures required by law were in place and, on top of that, was insured for damage caused, civil liability conventions are less linked to prevention than to the polluter-pays principle (¶ 38 *et seq*). This is succinctly highlighted by the preamble of the Lugarno Convention which States in its 6th recital: "Having regard to the desirability of providing for strict liability in this field taking into account the 'polluter pays' principle".[66]

30 Even though it has not yet been established that environmental liability is a necessary part of due diligence under the no-harm rule, customary international law may come to recognise a separate and independent legal obligation for States to provide for liability in cases of transnational environmental harm, a possibility which will be discussed below (¶ 38 *et seq*).

3.3.3 General Principles of International Law and Environmental Liability

31 One prominent feature of international environmental law is the pivotal role of environmental principles, which has heavily proliferated over the last 50 years.[67] The main characteristics required of environmentally-centred legal principles are that they are general, essential and fundamental and when used by way of deductive reasoning, seemingly carry environmental values and progressiveness into the international legal system. Given customary international law lacks responsiveness to pressing and rapidly evolving environmental problems because States prioritise short-term economic factors above all else, the reliance on environmental principles as a driving force to guide legal development does not come as a surprise. However, their normative weight has been disputed in individual cases, largely based on the given principle's source, specific content and frequency of its reception.

Identification of General Principles of (International) Law

32 General principles of law are only partially captured by Article 38(1)(c) ICJ Statute as this provision refers solely to general principles which can be identified in all major national legal systems and are then elevated to the international legal level. This method of identification distinguishes them from general principles of international law. Despite certain terminological ambiguities in academic writing, the latter are foundational principles formed within the international legal order as they are widely acknowledged in treaties, customary international law and, as the case may be, soft law instruments.[68] Despite the difference in provenance, namely

[66] Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, ILM 32 (1993) 1228 (not in force).

[67] Starting with the United Nations Conference in the Environment, held in Stockholm in 1972; cf Martin (2018), pp. 13 *et seq*.

[68] ILC SR Marcelo Vázquez-Bermúdez, Second Report on General Principles of Law, 9 April 2020, paras. 118 to 221, UN Doc A/CN.4/741 (not mentioning soft law documents).

domestic law and international law, the line between the two categories of principles easily blurs as the two legal spheres are not hermetically separated but in constant transposition. By way of example, the polluter-pays principle started as an economic principle in place in several major market economies,[69] its value was subsequently recognised and the principle was moulded into various other national and European Union laws. Subsequently, it attained the status of a principle of international environmental law used in numerous international documents (e.g. Principle 16 of the 1992 Rio Convention) and conventions (e.g. Article 3(1) of the 1996 London Protocol to the Convention on the Prevention of Marine Pollution by the Dumping of wastes and other matters).

The above shows that principles, in order to be legally relevant in the international sphere, require broad recognition by States or other international actors with law-making capacity, domestically and on the international plane. The importance of a principle's recognition as a legal principle was reemphasised by the *Iron Rhine* arbitration award. **33**

***Iron Rhine ("Ijzeren Rijn") Railway Case* (Belgium v the Netherlands)** **34**

The 2005 *Iron Rhine* award[70] concerned a dispute between The Kingdom of Belgium and The Kingdom of the Netherlands over the reactivation of the Iron Rhine railway (Ijzeren Rijn) to link the Belgian port of Antwerp and the German city of Mönchengladbach via the Dutch provinces of Noord-Brabant and Limburg. The railway began operating in 1879 but saw reduced use in the twentieth century which resulted in some sections being closed and freight trains forced to use other routes. The reactivation of the Iron Rhine railway was not contested between the parties but they differed over the entitlement of Belgium to establish the plan for its reactivation and the entitlement of the Netherlands to insist on conditions specified under Dutch law for such a reactivation. The Tribunal ruled, *inter alia,* that Belgium had an obligation to fund the environmental element of the overall costs of the reactivation. The importance of the award for international environmental law lies in the Tribunal's approach to the environmental aspects within the broader sustainable development principle: "Environmental law and the law on development stand not as alternatives but as mutually reinforcing, integral concepts, which require that where development may cause significant harm to the environment there is a duty to prevent, or at least mitigate such harm. This duty, in the opinion of the Tribunal, has now become a principle of general international law."[71]

[69] OECD, The Polluter Pays Principle, Paris 1992, OCDE/GD(92)81.

[70] PCA *Arbitration regarding the Iron Rhine ('Ijzeren Rijn') Railway* (Belgium v Netherlands) (2007) 27 RIAA 35.

[71] PCA *Arbitration regarding the Iron Rhine ('Ijzeren Rijn') Railway* (Belgium v Netherlands) (2007) 27 RIAA 35, para. 59.



Fig. 3.1 Identification of principles of general environmental law by the Iron Rhine Award

35 In order to verify the existence of an international legal duty to prevent significant environmental harm within the territory where the development project is situated (Fig. 3.1), the Arbitral Tribunal in the 2005 *Iron Rhine* award first referred to the 1972 Stockholm Conference on the Environment.[72] This event was considered as the starting point of a 'trend' in international and European law to integrate environmental measures in the design of economic development activities. Instead of identifying the relevant pieces of legislation, the Tribunal decided to point at Principle 4 of the 1992 Rio Declaration, which the tribunal viewed as capturing the said legislative trend. Principle 4 emphasises that "environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it." Labelled as an 'emerging principle' in the year 1992, the Tribunal considered it to be a 'principle of general international law' in 2005 with reference to

[72] PCA *Arbitration regarding the Iron Rhine ('Ijzeren Rijn') Railway* (Belgium v Netherlands) (2007) 27 RIAA 35, para. 59.

the ICJ's *Gabčíkovo-Nagymaros* case,[73] where the Court spoke of 'new norms' and 'new standards' which States have to take into consideration when realising infrastructure projects.[74]

36 By considerring 'new rules and standards' to which the ICJ vaguely refers as manifestations of the 'principle of general international law', the *Iron Rhine* award provides a telling example for the tendency to blur the lines between principles and rules as well as principles of general international law and customary international law to suit the needs of judicial reasoning.[75] Indeed, principles of general international law taking the form of rules are associated with a process of considerable methodological simplification, which makes them so compelling when compared to customary international law. The high level of abstraction, which is generally considered a characteristic of general principles of law (such as "good faith"),[76] had already been abandoned by the time the principles were enshrined in the 1992 Rio Declaration. The concise language of many Rio principles foresees the most important function of general principles of international environmental law, namely to initiate and facilitate the emergence of international rules on the basis of which legal environmental obligations can be determined without the need to identify corresponding State practice and *opinio iuris*.[77]

37 Whether or not a principle of general international law evolve into a rule depends on many factors, not only as to the principle's language in terms of the level of abstraction but also as to its function (e.g. driving legal development or providing

[73] ICJ *Gabčíkovo-Nagymaros* (Hungary v Slovakia) [1997] ICJ Rep 7, para. 140.

[74] The Tribunal took note of the debate on the differences between principles and rules but refused to enter into the controversy of the PCA *Arbitration regarding the Iron Rhine ('Ijzeren Rijn') Railway* (Belgium v Netherlands) (2007) 27 RIAA 35, para. 58-60. However, it is noteworthy that the Tribunal rather considered the 'environemtanl norms' as relevant in the context of Article 31(3)(c) of the Vienna Convention on the law of Treaties ("any relevant rules of international law applicable in the relations between the parties").

[75] It is worth noting that the Tribunal is not entirely consistent in its argument that an emerging principle has crystalised into a new rule in para. 59. This is evident from the fact it used a different method in para. 223; after referring in para. 222 to the traditional no-harm rule and the principle of prevention, both of which address transboundary environmental harm, the reasoning continued in para. 223 that: „The Tribunal is of the view that, *by analogy*, where a state exercises a right under international law within the territory of another state, considerations of environmental protection also apply." (emphasis here).

[76] ICJ *International Status of South West Africa* (separate opinion *McNair*) [1950] ICJ Rep 146, 148.

[77] Martin (2018), p. 19.

political orientation).[78] Principle 2 of the 1992 Rio Declaration phrased the principle of prevention in distinct normative language ("State have . . . the responsibility to ensure, that"), whereas when elucidating the polluter-pays principle, Principle 16 gives political guidance at best ("National authorities should endeavour to promote the internalization of environmental cost. . ., taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment."). The choice of language in 1992 has had an enduring impact as it still resonates today when the polluter-pays principle is invoced by States and discussed in academic writing.

Polluter-Pays Principle and Environmental Liability

38 Since its introduction by the OECD in 1972, the polluter-pays principle (Chap. 2 ¶ 10 (Sect. 2.2.1)) has left its marks on innumerable international, European and domestic environmental instruments and laws.[79] What was originally perceived as a political instrument for the allocation of costs for pollution prevention and pollution control developed into an all-encompassing principle designed to shift the cost burden for environmental damage to the polluter (Fig. 3.2).[80] This secures the legal principle's place in the environmental-liability context, as illustrated by Directive 2004/35/EC on environmental liability, which provides in Art 1 that: "The purpose of this Directive is to establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage."[81] While it is clear that environmental liability is one way to implement the polluter-pays principle's approach to cost allocation, the question remains whether the principle prescribes the polluter's liability for any environmental damage caused.

[78] Martin (2018), pp. 16–17; See on the various utilisations of „principles" in international jurisprudence, SR Marcelo Vázquez-Bermúdez (ILC), First Report on General Principles of Law, 4 April 2019, UN Doc A/CN.4/732.

[79] OECD, Recommendation of the Council Concerning International Economic Aspects of Environmental Policies, C(72)128, para. 4: "The principle to be used for allocating costs of pollution prevention and control measures to encourage rational use of scarce environmental resources and to avoid distortions in international trade and investment is the so-called "Polluter-Pays Principle"; available at https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0102, last accessed 25 April 2022.

[80] Schwartz (2018), p. 262.

[81] PCA *Arbitration regarding the Iron Rhine ('Ijzeren Rijn') Railway* (Belgium v Netherlands) (2007) 27 RIAA 35, para. 59.



Fig. 3.2 Expansion of the polluter-pays principle, Sources: European Court of Auditors (European Court of Auditors, The Polluter Pays Principle: Inconsistant Application across EU Environmental Policies and Action, Special Report 2021, at 7, available at: https://www.eca.europa.eu/Lists/ECADocuments/SR21_12/SR_polluter_pays_principle_EN.pdf, last accessed 25 April 2022.)

Despite the omnipresent invocation of the polluter-pays principle in international, regional and national instruments, the principle's legal implications are far from clear.[82] The arbitral tribunal in the 2004 *Rhine Chlorides* case supports this view by observing that "(the polluter-pays) principle features in several international instruments, bilateral as well as multilateral, and that it operates at various levels of effectiveness. Without denying its importance in treaty law, the Tribunal does not view this principle as being a part of general international law."[83] On this basis, the tribunal refused to consider the principle under Article 31(3)(c) VCLT, which allows for the systemic interpretation of a treaty by taking into account "any relevant rules of international rules of international law applicable between the parties". Although, **39**

[82] Boyle (1991); de Sadeleer (2005), pp. 21–33; Sands and Peel (2018), pp. 240–244; Kravchenko et al. (2012), p. 53 "perhaps emerged as a customary rule of international law".

[83] This case concerned the Auditing of Accounts between the Kingdom of the Netherlands and the French Republic Pursuant to the Additional Protocoll of 25 September 1991 to the Convention of the Protection of the Rhine against Pollution by Chlorides of 3 December 1976, PCA *Audit of Accounts Between the Netherlands and France in Application of the Protocol of 25 September 1991 Additional to the Convention for the Protection of the Rhine from Pollution by Chlorides of 3 December 1976* (Netherlands v France) (2004) 25 RIAA 267, para. 103 (unofficial English translation of the Award).

it is worth noting that the arbitral tribunal in the 2005 *Iron Rhine case* considered the principle of prevention as falling within the ambit of Article 31(3)(c) VCLT (¶ 33 *et seq*).[84]

40 Given that the polluter-pay principle serves as a label, rationale and guiding principle for a vast variety of instruments concerned with the allocation of environmental costs, it appears to lack the necessary legal precision to support an obligation for States to implement a specific cost-allocation model. By way of example, one can ask the question of who can be classed as a 'polluter'? Is it only those who directly cause the environmental damage or does it also include those who contributed indirectly, such as consumers? The answer here is not obvious from the principle itself but is determined by the relevant rules which give expression to the polluter-pays principle in one way or another.[85] In addition, there is more than one environmental liability model available for States to choose from (Chap. 5) with some of the better-known being centred on:

- civil liability (the horizontal legal relationship between a polluter and an injured party);
- administrative liability (the vertical legal relationship between State authorities and a polluter);
- governmental liability (the vertical legal relationship between a State and an injured party), with the possibility for the State to take, if appropriate, recourse against the polluter.

41 The variety of legal options under the conceptual umbrella of the polluter-pays principle does not diminish its legal status and value as a general principle of international environmental law[86] which, according to ICJ Judge *Cançado Trindade*, justify, inspire, inform and conform to the legal system's rules.[87] In addition, the polluter-pays principle is one of many widely-recognised principles of international environmental law, all of which are interrelated and complementary as they mutually reinforce their legal and conceptual clout.

42 An integrated approach to international environmental principles brings the polluter-pays principle within the scope of the prevention principle the ultimate goal of which is the avoidance of environmental harm.[88] From this perspective, it can be argued that the polluter-pays principle's aim is not only to remedy environmental damage and internalise environmental costs but also to contribute to harm avoidance. The consequence of this understanding is that the polluter-pays principle

[84] PCA *Arbitration regarding the Iron Rhine ('Ijzeren Rijn') Railway* (Belgium v Netherlands) (2007) 27 RIAA 35.

[85] Schwartz (2010), p. 247; van Calster and Reins (2013), para. 1.55.

[86] See e.g., the 1990 International Convention on Oil Pollution, Preparedness, Response and Cooperation, which states in its preamble (7th recital): "Taking into account of the 'polluter pays' principle as a general principle of international environmental law", 1891 UNTS 78.

[87] ICJ *Pulp Mills on the River Uruguay* (Argentina v Uruguay) (separate opinion Cançado Trindade) [2010] ICJ Rep 135, para. 201.

[88] Duvic-Paoli (2018), p. 167.

does not support environmental liability models that effectively shield the actual polluter from recourse and responsibility.[89]

From this, it follows that it only requires a small step to establish an 'emerging principle' that combines the polluter and preventive principles into the following new rule: The polluters' ultimate[90] responsibility and liability shall not be excluded invariably, indiscriminately[91] and arbitrarily[92]. **43**

3.4 State Responsibility for Transboundary Environmental Harm

The violation of both a duty under either a bilateral or multilateral environmental agreement (¶ 12) or rules of general international law (¶ 14 *et seq*) by a State entails its international responsibility vis-à-vis the injured State (Article 1 ASR) or, depending on the specific rule infringed, vis-à-vis any other State representing a collective legal interest (Article 48 ASR). As a legal consequence, the responsible State is obliged to make reparations (Article 34 ASR) with a monetary payment (compensation) being only one of many means of providing reparation for injury. However, compensation is often provided in practice to offset the environmental damage because restitution in kind is not possible (cf. Article 36 ASR).[93] **44**

In the context of this book's overall topic, namely corporate liability for transnational environmental liability, two ASR issues are of particular interest which will be considered in more detail below. First, under what legal conditions is corporate conduct attributable to a State so that the State is responsible for any transnational environmental damage caused by a given corporation (¶ 46 *et seq*)? Second, are the customary rule on compensation (Art 36 ASR) suitable to provide adequate compensation for damage to the environment (¶ 64 *et seq*)? **45**

[89] This approach allows mandatory insurance for environmentally-hazardous activities (Chap. 5 ¶ 13 (Sect. 5.2)) or state liability (Chap. 11), since effective financial compensation is covered by the polluter-pays principle. In this regard, the principle has to balance compensation and prevention, as the former can be undermined by the polluter's bankruptcy (see the 2000 *Baia Mare Cyanide Spill* case, (Chap. 5 ¶ 5 (Sect. 5.1)).

[90] The phrase ‚ultimate responsibility and liability' allows for cost recovery and recourse.

[91] E.g., if national law and practice releases domestic public and private polluters *per se* from responsibility and liability.

[92] E.g., if national law and practice releases domestic public and private polluters of an economic sector, such as the car industry, from liability without objective reason.

[93] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) [2018] ICJ Rep 15, para. 31.

3.4.1 Responsibility for Public Activities and Omissions

46 The 1941 Trail Smelter Award carefully noted that "no State has the right to use (. . .) its territory" and thereby addressed public activities. Any State, acting through its organs (Article 4 ASR), can directly cause damage to the environment of the neighbouring State by engaging in a variety of activities, such as weapons tests or public infrastructure projects.[94] By way of example, in the 2015 *Certain Activities and Construction of a Road* case, the ICJ had to assess Nicaragua's and Costa Rica's environmental duties linked to Nicaragua's dredging activities and Costa Rica's road construction.[95]

47

Article 4(1) ASR: Conduct of Organs of a State
"The conduct of any State organ shall be considered an act of that State under international law, whether the organ exercises legislative, executive, judicial or any other functions, whatever position it holds in the organization of the State, and whatever its character as an organ of the central government or a territorial unit of the State."

48 When acting in their official capacity, State organs represent the State irrespective of whether the act is of a sovereign or commercial legal nature.[96] Proceeding from the preventive obligations under the no-harm rule that applies to both public and private harmful activities (¶ 21), one may conclude that it does not matter whether a State is responsible for a failure to prevent harmful private activities or whether it is directly responsible for an environmentally harmful outcome arising from its pubic activities due to attribution. However, this conclusion would be premature because, with regard to private activities, customary international law acknowledges that a State has limited knowledge of what happens on its territory in the private economic sphere (e.g. the illegal use of CVC-11 gas in Eastern China[97]).[98] Obviously, if the harmful activities are attributable to the State it is not accepted under the rules of State responsibility for the State to exonerate itself by claiming it had no control over or knowledge of the activities. This fact, however, does not turn the State' obligation under the no-harm rule into an obligation of result in the sense that the occurrence of significant transboundary harm caused by State organs necessarily triggers the

[94] PCA *Trail Smelter Case* (United States v Canada) (1941) 3 RIAA 1905, *see also:* PCA *Lac Lanoux Arbitration* (France v Spain) (1957) 12 RIAA 281.

[95] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) *and Construction of a Road in Costa Rica along the San Juan River* (Nicaragua v Costa Rica) [2015] ICJ Rep 665, para. 100 and 177.

[96] ILC, Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, YBILC 2001 Vol. II Part 2, UN Doc A/56/10, Article 4 ASR para. 6.

[97] Montzka et al. (2018), p. 413.

[98] Seršić (2016), p. 163.

State's responsibility. Rather, the State's obligation remains a due diligence obligation of conduct because the State does not necessarily have full control over transboundary environmental impacts when implementing governmental projects. Nevertheless, a State has considerably more courses of action available to prevent transboundary environmental damage when such damage is of its own making.

3.4.2 Environmentally Harmful Activities of State-Owned Corporations

The flexible standard of care in international environmental law draws attention to State-owned enterprises (SOEs) and State-controlled entrepreneurial activities. In many industrialised States (OECD States), private producers and private consumers cause the vast majority of environmental damage with SOEs playing a relatively minor role as there are so few of them.[99] By way of contrast, in emerging economies such as China, India and Brazil, as well as post-transition economies such as Russia, Hungary and the Baltic States, governments are still significant shareholders in many large companies carrying out important domestic activities, for example, in the mining and energy sectors as well as in telecommunications, banking and transport.[100] When this is the case the State has, in one way or another, influence on the decisions and activities of the SOE. **49**

Generally speaking, the ILC commentaries on the ASR's rules of attribution are of little help as far as the acts of SOEs are concerned. In the context of Article 4 ASR, which deals with the conduct of the organs of a State, the commentaries do not address the question of whether SOEs can be considered as State organs. Even the commentary to Article 8 ASR, dealing with the private conduct directed or controlled by a State, avoids explicitly mentioning SOEs. In contrast, the ILC commentary to Article 5 ASR does provide some insight into this matter, as seen in the box below. **50**

[99] See the definition of an SOE in OECD, OECD Guidelines on Corporate Governance of State-Owned Enterprises, 2015, https://doi.org/10.1787/9789264244160-en, last accessed 25 April 2022: "A state-owned enterprise is any corporate entity recognised by national law as an enterprise and in which the central level of government exercises ownership and control."

[100] OECD, The Size and Sectoral distribution of State-Owned Enterprises, 2017, 8, https://doi.org/10.1787/9789264280663-en, last accessed 25 April 2022.

51 **Article 5 ASR: Conduct of Persons or Entities Exercising Elements of Governmental Authority**
"The conduct of a person or entity which is not an organ of the State under article 4 but which is empowered by the law of that State to exercise elements of the governmental authority shall be considered an act of the State under international law, provided the person or entity is acting in that capacity in the particular instance."

52 According to the ILC commentary to Article 5 ASR, the fact that (1) a company is classified as public in the domestic legal system, (2) a State participates in a company's raising of capital or (3) the State has ownership of company assets are not decisive criteria for attribution of the company's conduct to the State under Article 5 ASR.[101] Rather, every company, be it State-owned or not, empowered by domestic law to exercise governmental authority falls within the scope of Article 5 ASR. To this end, domestic law has to clearly recognise certain activities of any company in question as having public purposes, in contrast to having private for-profit purposes, to attribute any acts undertaken in performing these functions to the State.[102] Having said that, Article 5 ASR does not rule out that under specific circumstances SOEs can be considered *de facto* organs which, according to the ICJ, fall under the scope of Article 4 ASR (see ¶ 47).[103] The ICJ considers any entity in a relationship of complete dependence on the State as a *de facto* organ, even if it does not enjoy organ status under domestic law.[104] If this complete dependence is established, the legal nature of the act, i.e. whether it was undertaken with governmental authority or as a commercial act, is of no consequence for attribution. In this respect, it is important not to paint all SOEs worldwide with the same brush but to have a closer look at the particulars and traditions of specific States. For example, the author *Ji Li* considers the relationship between the Chinese government and Chinese SOEs as quite different from that of their western counterparts.[105] In any case, special relevance in the context of Article-4 attribution is the dual function of SOEs' executives as both State organs and chief executive officers (CEOs). In

[101] ILC, Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, YBILC 2001 Vol. II Part 2, UN Doc A/56/10, Article 5 para. 3.

[102] Attribution of a state-owned corporation-act to a state according to Article 5 ASR is of special importance in international investment law, see *Emilio Augustín Maffezini v Spain* ARB/97/7, 13 November 2000, para. 77–83.

[103] ICJ *Application of the Convention on the Prevention and Punishment of the Crime of Genocide* (Bosnia and Herzegovina v Serbia and Montenegro) [2007] ICJ Rep 43, para. 392.

[104] ICJ *Application of the Convention on the Prevention and Punishment of the Crime of Genocide* (Bosnia and Herzegovina v Serbia and Montenegro) [2007] ICJ Rep 43, para. 397.

[105] Li (2015), p. 403.

addition, the State's authority to give comprehensive and binding instructions to an SOE's management is also of relevance.[106]

If the prerequisites of neither Article-4 nor Article-5 attribution are given, an SOE must be considered as a private actor. As a rule, any unlawful conduct of private individuals and companies within a State's territory does not lead to the international responsibility of the State for the private conduct unless the conduct is attributable to the State under the strict conditions of Article 8 ASR.[107] 53

Article 8 ASR: Conduct Directed or Controlled by a State 54
"The conduct of a person or group of persons shall be considered an act of a State under international law if the person or group of persons is in fact acting on the instructions of, or under the direction or control of, that State in carrying out the conduct."

Most importantly, it does not suffice for the purpose of attribution under Article 8 ASR that a private actor has committed an environmentally harmful act on a State's territory or that the State holds a certain percentage of ownership that goes hand in hand with structural control (voting rights) and oversight responsibilities. Unquestionably, a State's voting rights are important factors in the context of Article-8 attribution, together with the right to nominate and dismiss upper management, the right to give specific instructions and to exercise veto powers.[108] However, the ICJ made it plain that for Article-8 attribution it does not suffice that the State has overall control concerning the entity's activities; the State must have instructed or exercised effective control over the harmful act, for example, the introduction of toxins into the transboundary river. This degree of effective control exercised by State organs can be difficult to establish as far as the day-to-day business of an enterprise is concerned, even if it is State-owned. Most importantly, if the management of an SOE acts contrary to instructions issued by the company's oversight bodies in which the State is represented, the State can be deemed as having no effective control over the SOE's acts. As a result, these acts, e.g. clandestine toxic emissions, are not attributable to the State under Article 8 ASR.[109] 55

[106] ICSID *Deutsche Bank v Sri Lanka* ARB/09/2, 31 October 2012, para. 405b.

[107] Contradictory in this respect, the PCA *Trail Smelter Case* (United States v Canada) (1941) 3 RIAA 1905, at 1965, 1966 "Dominion of Canada is responsible in international law for the conduct of the Trail Smelter."

[108] Dereje (2016), pp. 405–407.

[109] Note that *ultra vires* acts (Article 7 ASR) are attributable to the state but Article 7 does not apply to Article 8 ASR, meaning unauthorised private acts are not attributable due to the state's obvious lack of effective control over the conduct.

Chernobyl

56 The Chernobyl nuclear disaster (1986) caused significant environmental damage as a result of nuclear fall-out in Sweden, Germany and the United Kingdom. Even though the Chernobyl Nuclear Power Station was a Soviet SOE, no injured State openly discussed the State responsibility of the Soviet Union based on legal attribution (Articles 4 to 8 ASR) when reserving their right to assert claims for damages against the Soviet Union. From the injured States' statements,[110] it can be concluded that they considered it a source of legal uncertainty that the Soviet Union was not a party to any international convention on the civil liability of operators.[111] Referring to the absence of treaty obligations as a basis of the Chernobyl Nuclear Power Station's operator liability, the Swedish government mentioned "customary international law principles", which probably refers to the no-harm rule and which may be invoked to support a claim against the Soviet Union.[112] Even if legal uncertainties shaped the opinions of the injured States at the time, the Chernobyl case can be used today as an example of the tendency of States to avoid bringing up the delicate issue of attribution as far as SOEs are concerned. More generally, the lack of meaningful international claim and compensation practice in the aftermath of Chernobyl is the reason why the case's significance for the international no-harm rule is rather limited. However, it is noteworthy that after 1986 States rushed to amend existing[113] and negotiate new nuclear civil liability conventions.[114] This illustrates that the international community of States favoured a path that involved the civil liability of SOEs to redress damage rather than pursuing State responsibility triggered by the attribution of the SOE's harmful acts.

[110] Reprinted in Sands and Peel (2018), p. 753 *et seq*.

[111] See Hansard, House of Commons 16 November 1987, Vol 122, Col 888 (Ms Michael Forsyth) available at https://api.parliament.uk/historic-hansard/volumes/6C/index.html, last accessed 25 April 2022.

[112] Correspondence between Sands and the Swedish Embassy in London, 10 December 1887, reprinted in Sands and Peel (2018), p. 753.

[113] In September 1986, less than six months after Chernobyl, experts from both the OECD/NEA and the IAEA concluded that a joint protocol uniting the Paris and Vienna Conventions would be the most practical and effective solution for closing existing nuclear-liability gaps. The result was the adoption, in September 1988, of the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention (Joint Protocol).

[114] E.g., 1997 Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage and the 1997 Convention on Supplementary Compensation for Nuclear Damage.

3.4.3 *Responsibility of the Home State for Corporate Activities Abroad*

The above considerations focused on the responsibility of a State of origin for transboundary environmental damage caused by a local public or private actor. Even though the legal conditions of the no-harm rule and the responsibility triggered by its violation are relatively clear-cut as far as the State of origin is concerned, they appear too narrow to effectively address environmental harm caused by transnationally operating companies. One aspect that appears unaddressed by the no-harm rule is the responsibility of the home State of a transnational corporation (TNC)[115] whose international subsidiaries operate in other States (so-called 'host States') and where they cause environmental damage. The transboundary aspect here is not the environmental damage but rather the managerial control of the parent company over its subsidiaries. **57**

Texaco Oil Extraction **58**

That the issue of transboundary managerial control of the parent company needs addressing is exemplified by Texaco, a subsidiary of Chevron since 2001, whose oil extraction operations outside of its home State (the USA) between 1964 and 1992 led to serious crude oil contamination of the soil, water pollution, deforestation and soil erosion in Ecuador.[116] In 1995, Texaco reached a US$40 million agreement with the Ecuadorian government for a remediation programme, however, environmentalists subsequently disputed the success of the clean-up efforts. So far, the USA's sole contribution to the case is a US court ruling from 2011, according to which an Ecuadorian Lago Agrio judgment of 2001 requiring Chevron to pay US$9.5 billion for the environmental damage is not enforceable in the US due to serious procedural defects (judicial corruption).[117]

The academic debate about home-State responsibilty for environmental damage in the host State is split along three legal avenues: the direct international responsibility of the parent company and/or subsidiary (Chap. 4), the liability of the parent company under the laws of the home State (Chap. 7) and the responsibility of the parent company's home State, which is the focus of this Chapter. As discussed below (Chap. 7) a home State has the right to regulate the activities of its **59**

[115] A TNC is characterised by geographically dispersed units whereby its headquarters and subsidiaries are located in different countries, see Sageder and Feldbauer-Durstmüller (2019), pp. 1 *et seq*.

[116] Morgera (2009), p. 6.

[117] The US ruling has been echoed by the decision of an arbitral tribunal administered by the Permanent Court of Arbitration, PCA Case No 2009-23, Chevron v Ecuador, Second Partial Award on Track II of 30 August 2018, para 10.13.

corporations outside of its territory as long as the home State has some accepted basis for jurisdiction, such as the active personality principle linked to the corporation's nationality (Sect. 7.7). It is, however, a completely different matter whether home States are obliged under international law to diligently take appropriate measures to prevent TNCs from damaging their host State's environment either directly or through their subsidiaries.

60 **Canatuan Mining Project**
In 2004, a representative of a Philippine municipality visited Canada to raise concerns about alleged violations of environmental and human rights at the Canatuan mining project on the island of Mindanao. The mine operator was owned by Canadian mining company TVI Pacific.[118] In reaction to these complaints, the Parliamentary Subcommittee on Human Rights and International Development expressed concerns that Canada does not yet have laws to ensure that the activities of Canadian mining companies abroad conform to human rights standards. In its report to the Canadian Parliament, the Committee called for "clear legal norms" to ensure that Canadian corporations and residents were held accountable for environmental and human rights violations abroad.[119] In October 2005, the Canadian government rejected the Committee's recommendation to establish accountability rules. While the Government acknowledged that States are primarily responsible for the promotion and protection of human rights as well as the environment, it deemed that Canadian laws with extraterritorial application would conflict with the sovereignty of foreign States.[120]

61 Considering the reluctance of the overwhelming majority of home States to force their TNCs into compliance with environmental norms in their foreign operations, it is difficult to establish that there is State practice and *opinio iuris.* (¶ 15 *et seq*) indicating the conviction of home States that they are legally obliged to regulate their TNCs' worldwide environmental conduct. This creates an obvious problem as such a conviction would be the basis of the home State's possible international duty to prevent harm caused by a TNC abroad. That said, there is no denying that the harm-prevention rule has the potential to evolve in this direction, as past developments of the traditional no-harm rule illustrate:[121] Whereas in 1941 the Trail Smelter award's focus was on reparation, Principle 21 of the 1972 Stockholm Declaration shifted the emphasis of the rule to States' positive duty to prevent. In addition, Principle 21 extended the no-harm rule to the global commons, which was declared a part

[118] The case is reported in Seck (2008), p. 180.

[119] House of Commons, Standing Comm. On Foreign Affairs & International Trade, 1st Sess, 38th Parl., 14th Report: Mining in Developing Countries 1 (2005) (Can) at 3.

[120] Seck (2008), p. 120.

[121] See Brent (2017), pp. 32–44.

of customary international law by the ICJ in the 1996 Nuclear Weapons Advisory Opinion.[122] Fourteen years later, the ICJ identified in the 2010 *Pulp Mills* case definite procedural obligations as part of the no-harm rule. All of this gives rise to legitimate expectations that the no-harm rule has not yet reached the end of its legal development. Most importantly, the nexus between human rights and a healthy environment may mean that customary environmental due-diligence obligations of a TNC home State may develop in the wake of extraterritorial human rights obligations (Chap. 10; Sect. 10.2).[123]

62 Having already moved ahead of general environmental law in this regard, human rights law cautiously embraces a duty of the home State to ensure that a parent company uses its corporate influence over its international subsidiaries to ensure that the latter respect human rights standards in host States. The Human Rights Committee in its recent General Comment No. 36 (2018) on Article 6, which deal with the right to life, elucidated that States parties to the ICCPR must "take appropriate legislative and other measures to ensure that all activities taking place in whole or in part within their territory and other places subject to their jurisdiction, but having a direct and reasonably foreseeable impact on the right to life of individuals outside their territory, including activities taken by corporate entities based in their territory or subject to their jurisdiction, are consistent with Article 6 (. . .)."[124] In communication No. 2285/2013 (*Yassin v Canada*) of 2017, the Human Rights Committee took a more cautious tone by observing that "human rights obligations of a State on its territory cannot be equated in all respects with its obligations outside its territory". Nevertheless, the Committee pointed out that there are situations where a State party has an obligation to ensure that rights under the ICCPR are not impaired by extraterritorial activities conducted by enterprises under its jurisdiction, particularly in cases where violations of human rights are very serious.[125]

63 In the same General Comment No 36 (2018), the Committee underlined that the right to life has an environmental dimension, noting that environmental degradation and climate change constitute some of the most pressing and serious threats to the ability of present and future generations to enjoy the right to life. The Committee thus concluded that the obligations under international environmental law should conform to the content of Article 6 of the International Covenant on Civil and Political Rights (ICCPR).[126] When considering all of these elements of the Human Rights Committee's interpretation of Article 6 ICCPR as a whole, the obligation of

[122] ICJ *Legality of the Threat or Use of Nuclear Weapons* [1996] ICJ Rep 226, para. 29.

[123] Viñuales (2016), p. 218.

[124] Human Rights Committee, General comment No. 36 (2018) on article 6 of the International Covenant on Civil and Political Rights, on the right to life—Doc. CCPR/C/GC/36, 2018, para. 22 (footnotes omitted).

[125] Human Rights Committee, Decision adopted by the Committee under article 5 (4) of the Optional Protocol, concerning communication No. 2285/2013, 26 October 2017, Doc. CCPR/C/120/D/2285/2013 para. 6.5.

[126] Human Rights Committee, General comment No. 36 (2018) on article 6 of the International Covenant on Civil and Political Rights, on the right to life—Doc. CCPR/C/GC/36, 2018, para. 62.

the home State to respect the environmental aspects of the right to life by regulating its TNC's transnational operations begins to take on a more substantive shape. Nevertheless, a word of caution is due: in contrast to human-rights courts, the Human Rights Committee lacks the legal power to authoritatively interpret the ICCPR as a 'living instrument'. Even though the international community, including the ICJ, ascribes great weight to the interpretations of the Committee,[127] progressive developments of obligations under the ICCPR require either the explicit or implicit acceptance of States parties over a certain period (cf. Article 31(3)(b) VCLT).[128] States parties have predominantly refrained from commenting on Draft Comment No. 36 before its adoption by the Human Rights Committee,[129] however, this silence does not necessarily mean that all States parties share the Committee's views. This is also evidenced by the heated debate involving the earlier Zero Draft on a "legally binding instrument to regulate (. . .) the activities of transnational corporations and other business enterprises", published by the UN Human Rights Council's intergovernmental working group on 16 July 2018.[130] Draft Article 9 of the Zero Draft stipulated home-State obligations comparable to those described in General Comment No 36 and had provoked harsh criticism by industrial States, most notably the European Union and its Member States (Chap. 4 ¶ 40 *et seq* (Sect. 4.2.3)).[131] Despite this dissent, the Human Rights Committee's extensive interpretation of the States parties' obligation vis-à-vis transnationally operating corporations is the first small step towards an internationally recognised responsibility for a home State if it fails to do all in its power (due diligence) to prevent its companies from causing environmental damage and human suffering in host States.

[127] ICJ *Ahmadou Sadio Diallo* (Republic of Guinea v Democratic Republic of the Congo) [2010] ICJ Rep 639, para. 66.

[128] ICJ *Application opf the International Convention on the Eliminationof All Forms of Racial Discrimination* (Qatar v United Arab Emirates), Judgment of 4 February 2021, para 101.

[129] But see Canada: "The Committee's interpretation of Article 6 attempts to expand the scope of the Covenant beyond the territory under the jurisdiction of the State. Such an interpretation would impinge on well-established principles of sovereignty. Canada requests that the General Comment reflect the exact language of Article 2(1) of the Covenant." USA: "Similarly, the United States does not agree with the Committee's assertions of the positive measures articulated in paragraphs 26" (in the adopted General Comment para. 22); The Netherlands: "Additionally, the text of paragraph 26 referring to corporate entities goes beyond the UN Guiding Principles on Human Rights and Business, which does not require States to regulate extraterritorial activities of businesses domiciled in their territory and/or jurisdiction." online available at https://www.ohchr.org/EN/HRBodies/CCPR/Pages/GC36-Article6Righttolife.aspx, last accessed 25 April 2022.

[130] Zero Draft of the legally binding instrument to regulate, in international human rights law, the activities of transnational corporations and other business enterprises**,** available at https://www.ohchr.org/Documents/HRBodies/HRCouncil/WGTransCorp/Session3/DraftLBI.pdf, last accessed 28 August 2022.

[131] Cf. Zamfir, European Parliament Research Service, Briefing: Towards a binding international treaty on business and human rights, November 2018, p. 10, 11, available at http://www.europarl.europa.eu/RegData/etudes/BRIE/2018/630266/EPRS_BRI(2018)630266_EN.pdf, last accessed 25 April 2022.

3.4.4 State Responsibility and Compensable Damage to the Environment: The ICJ Wetland Compensation Case

In 2018, the ICJ had the opportunity to adjudicate for the first time in its existence on a claim for compensation for environmental damage (*Wetland Compensation* Case).[132] The case concerned compensation owed by Nicaragua to Costa Rica brought about by Nicaragua's excavation activities in a wetland border area protected under the Ramsar Convention. Highly anticipated by international environmentalists, the judgment is indicative of the general reluctance of the international judiciary to depart from an economy-centred view on redress for environmental harm. This general observation is valid irrespective of whether a State caused the environmental harm (*Wetland Compensation*) or a corporation (*Trail Smelter*).[133] **64**

The *Wetland Compensation* case illustrates the dilemma in which the ICJ finds itself: on the one hand, the Court acknowledged the value of an intact environment but, on the other hand, it struggled to properly quantify environmental damage due to its economy-centred value system. Having developed into an important international environmental court for inter-State disputes, the ICJ begins with a promising statement on the intrinsic value of the environment: "(. . .) it is consistent with the principles of international law governing the consequences of internationally wrongful acts, including the principle of full reparation, to hold that compensation is due for damage caused to the environment, in and of itself, in addition to expenses incurred by an injured State as a consequence of such damage."[134] **65**

With regard to the valuation of the lost or impaired environmental goods and services, the ICJ took the view that international law does not prescribe specific methods of valuation and thus opted for a holistic approach by considering the ecosystem as a whole rather than attributing monetary values to specific categories of environmental goods and services with different recovery periods.[135] Despite this auspicious point of departure, which may have an important impact on future environmental law cases before other international courts and tribunals, the ICJ judgment itself did not live up to the expectations of many. Besides stating the fact that the ecosystem should be treated as a whole, the Court abstained from outlining the parameters of any possible overall valuation. After discussing the methods proposed by Costa Rica as the applicant ('ecosystem approach') and **66**

[132] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) [2018] ICJ Rep 15 (so-called Wetland Compensation Case).

[133] Kindji and Faure (2019), p. 7.

[134] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) [2018] ICJ Rep 15, para. 41.

[135] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) [2018] ICJ Rep 15, para. 78.

Nicaragua as the respondent ('cost of replacement approach'), the Court ultimately settled on what it considered a "reasonable" amount of damages.[136] That said, the Court deemed that the removal of approximately 300 trees to be the most significant damage. In this respect, the ICJ awarded Costa Rica a moderate sum (US$120,000) in direct relation to the costs and expenses incurred in preventing irreparable prejudice to the wetland which was degraded by Nicaragua's excavation activities.[137] Most importantly, the Court did not make any equity considerations, such as the character of the affected terrain and the implications of deforestation for climate change.[138] In relation to this, Judge Bhandari's criticism is hardly surprising when he noted in his separate opinion that "(o)nly if those causing harm to the environment are made to pay beyond the quantifiable damage can they be deterred from causing similar harm in the future."[139]

67 Another prominent issue in environmental litigation, the causal nexus between damage and unlawful activity, was only shallowly addressed by the ICJ in the *Wetland Compensation case* and even then, it was provided without any legal guidelines of practical value apart from the observation that it is within the Court's discretion to determine whether the causal nexus is sufficiently proven:

> "In cases of alleged environmental damage, particular issues may arise with respect to the existence of damage and causation. The damage may be due to several concurrent causes, or the state of science regarding the causal link between the wrongful act and the damage may be uncertain. These are difficulties that must be addressed as and when they arise in light of the facts of the case at hand and the evidence presented to the Court. Ultimately, it is for the Court to decide whether there is a sufficient causal nexus between the wrongful act and the injury suffered."[140]

In the given case, the Court had no problems establishing a causal link between the four categories of environmental goods and services for which Costa Rica claimed compensation (trees, other raw materials, gas regulation and air quality services, as well as biodiversity) and Nicaragua's excavation activities in the area. It considered the impairment and loss without further ado a direct and certain consequence of the activities.[141] As such, the *Wetland Compensation* case can be regarded as an example for a rather conventional causal nexus determination and is therefore unrewarding for cases of cumulative damage or long-standing damage to the

[136] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) [2018] ICJ Rep 15, para. 52 and 86.

[137] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) [2018] ICJ Rep 15, para. 86.

[138] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (dissenting opinion *Dugard*) (Costa Rica v Nicaragua) [2018] ICJ Rep 119, para. 7.

[139] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (separate opinion *Bhandari*) (Costa Rica v Nicaragua) [2018] ICJ Rep 96, para. 19.

[140] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) [2018] ICJ Rep 15, para. 34.

[141] ICJ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v Nicaragua) [2018] ICJ Rep 15, para. 75.

environment not attributable to a single entity or State but to a sector or types of hazardous and harmful activities that are at the core of an increasing number of environmental litigations.

3.5 State Liability for Transboundary Environmental Damage

As discussed above (¶ 3 *et seq*), the legal concept of State liability for environmental harm covers all the rules which are not concerned with the international wrongfulness of a State's action or inaction. Consequently, operationalising State liability requires a conventional or customary primary rule which can be used to oblige a State to pay damages for environmental harm. In the absence of any general treaty on State liability for environmental damage, customary international law remains the main option as a source a primary liability rule (¶ 14 *et seq*). Such a rule would not only require the supporting general practice of States, such as domestic jurisprudence, laws or international treaties to this effect, but also States' acceptance that these practices are required under international law (*opinio juris*).[142] At first glance, the Trail Smelter Award, considered to be a landmark decision of modern international environmental law[143], seems to provide such a liability rule.[144] However, the wording of the 1941 award points towards Canada's responsibility for transboundary environmental harm rather than Canada's liability (¶ 7).[145] Similarly, international treaty practice does not support the existence of a customary rule of State liability for lawful acts that cause damage. If a plethora of liability instruments were in existence that amounted to sufficient State practice and *opinio juris*, an argument could be made for a rule under customary international law. However, among the 1414 currently active MEAs (¶ 11), only one imposes liability on States for damage caused by lawful activities under their jurisdiction or control, namely the Convention on International Liability for Damage Caused by Space Objects.[146] The Convention on the Law of the Non-navigational Uses of International Watercourses considers State liability an option if the State of origin and the affected State agree on it (Article 7 para 2; ¶ 28).[147] By way of comparison, 13 MEAs establish a regime that focuses

68

[142] Article 38(1)(b) Statute of the International Court of Justice: "international custom, as evidence of general practice accepted as law".

[143] Schoenbaum (2006), p. 196.

[144] PCA *Trail Smelter Case* (United States v Canada) (1941) 3 RIAA 1905; amongst the wealth of academic writing see Bratspies and Miller (eds) (2006); Read (1963), p. 213; Mickelson (1993), p. 219.

[145] PCA *Trail Smelter Case* (United States v Canada) (1941) 3 RIAA 1905, 1965.

[146] Convention on International Liability for Damage Caused by Space Objects of 29 March 1972, entered into force 1 September 1972) 961 UNTS 13810.

[147] Convention on the Law of the Non-navigational Uses of International Watercourses of 21 May 1997, entered into force 17 August 2014, 2999 UNTS 77.

on the civil liability of private or public operators for ultra-hazardous activities, although only four of such agreements are in force (Chap. 5 ¶ 2 *et seq* (Sect. 5.1)).[148] At least when seated at the negotiating table, civil liability is a more palatable option for States than their own liability.

69 The Liability Convention for Damage Caused by Space Objects regulates the highly specialised area of outer space and is not predominantly environment orientated, which make the Convention *lex specialis* rather than evidence of a general rule. Article 7(2) of the 1997 Convention of the Non-navigational Uses of International Watercourses makes provision for compensation, even if the State using the watercourse complied with its preventive obligations pursuant to Article 7(1). However, the Convention only stipulates the duty to discuss State liability with the affected watercourse States after significant harm has occurred, which is exemplary for States' reluctance to commit in advance to their being liable. When negotiating the 2010 Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Regress, the topic "State liability for transboundary damage caused by living modified organism" was quickly removed from the table due to a lack of support.[149] The same thing happened during the negotiations of a liability instrument implementing Art 16 of the 1976 Barcelona Convention for the Protection of Marine Environment and the Coastal Region of the Mediterranean:[150] Not only were the Contracting Parties unable to agree on a legally binding instrument and had to settle for guidelines (Chap. 5 ¶ 37 *et seq* (Sect. 5.4)), they were also unwilling to support any concept that includes residual State liability if, for example, the liable operator defaults.[151] Finally, the liability-hostile interpretative statements to environmental treaties such as the 2015 Paris Agreement (Chap. 16) and the 1979 Convention on Long-Range Transboundary Air Pollution v 1979 (footnote to Article 8) show that, at least in principle, States will not readily accept liability unless they can be made internationally responsible for unlawful acts or omissions.

70 The lack of conventional liability rules is not remedied by general principles of law. The polluter-pays principle does not support a primary rule of State liability for transboundary environmental damage. At best, the principle can justify operator liability under international law, irrespective of whether the operator is public or private (¶ 38 *et seq*). However, State liability and operator liability are two different liability concepts since only the former is triggered by the occurrence of transboundary environmental damage regardless of the operator to whom the damage is attributable.

71 The aspects discussed above, when considered as a whole, make it evident that customary international law does not currently provide any rule on State liability for

[148] Daniel (2003).

[149] Lefeber (2016), p. 80.

[150] The 1976 Barcelona Convention (1102 UNTS 44) was amended several times; what was originally Art 12 is now the 1995 amendment to Art 16.

[151] Guideline A para. 2, Doc UNEP(DEPI)/MED.IG,17/10 of 18 January 2008; 210; for details see Scovazzi (2009).

transboundary harm due to a lack of meaningful State practice and, most importantly, *opinio iuris* (¶ 16).

3.6 Conclusion

Much has been written about State responsibility for transboundary environmental harm, not only to make sense of the 1941 *Trail Smelter Award* in a modern context but also because of the growing number of ICJ judgments that shape the modern understanding of the no-harm rule and the preventive obligations of States attached to it. Despite a number of remaining legal uncertainties, among them the shape and form of possible substantive due-diligence obligations, the no-harm rule, or the harm-prevention rule as it is also referred to, is a beacon of hope for international environmental law. This cannot be said about the state of affairs surrounding States' potential liability for transboundary environmental harm. The notion that the State of origin could be primarily, residually and second-tier liable for transboundary environmental damage, irrespective of any wrongdoing or lack of diligence, has little to no governmental support in international negotiations. This is especially true for any commitment within multilateral environmental regimes which, from the perspective of States, would be incalculably expensive, and therefore intolerable, public-liability risks. **72**

What is of particular interest in the context of this study are any obligations of States under customary international law and general principles of environmental law to provide for corporate liability for transboundary environmental damage. Therefore, the question arises whether States' own substantive due-diligence obligations under the no-harm rule could encompass a State's duty to ensure the liability of a corporation in cases where a risk of transboundary environmental harm materialises. Even though civil liability can rightly be considered an important part of any prevention strategy, a customary rule that links corporate liability provisions to States' substantive obligations under the no-harm rule does not exist yet. Another avenue of interest pursued by this Chapter is the use of general principles of international environmental law to establish a duty for States to provide for corporate environmental liability within their domestic legal systems. The polluter-pays principle appears to be ideally suited for this purpose, however, it is still essentially only a policy guideline that allows for many different legislative solutions to apply civil liability for any environmental harm done. That said, it can be argued that the combined principles of polluter-pays and prevention have the potential to restrict the legislative margins of policy choices when States shape their national liability regimes: the polluters' ultimate responsibility and liability for any significant environmental damage caused shall not be excluded invariably, indiscriminately and arbitrarily. **73**

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Robert Burrell, Su Jung Jee, Kerstin Hötte & Caoimhe Ring

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Intellectual Property Rights, Climate Technology Transfer and Innovation in Developing Countries

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and adaptation action.[42]

In the context of climate technology, patent term extensions may have negative impacts. Many climate technologies are more cumulative compared to discrete molecular inventions, as in medicines. Thus, current inventions build on previous ones (e.g. solar PV, batteries, hybrid engines). In these cases, patent term extensions may even hinder subsequent innovation (Maskus, 2010).

For most climate technologies, mechanisms that focus on the demand side and enabling environments are of primary importance. Many – especially those that matter in a developing country context – are *'old'* technologies, and patent term extensions may have negative impact if they limit the scope of imitative and adaptive innovation. For example, many of the solar PV technologies deployed (and developed) in developing and emerging countries rely on technologies with expired patents. An extension of the duration might hinder the exploitation of available technological solutions.

Other IP discussions: Another flexibility within the TRIPS framework that has been used in the context of pharmaceuticals are anti-evergreening provisions. This flexibility may be used to prevent firms from extending the lifetime of a patent through different practices over a period than would be normally permitted by law (Liu, 2015). This may be a barrier to competition, leading to excessive prices for new drugs. However, as – suggested by the interviews and literature – the prioritised technologies are traded on competitive markets with a wide range of technological substitutes. Whether abusive evergreening practices become a matter in the future, for example with respect to GMOs, may need to be monitored, but to date, there is no evidence that this flexibility plays a role.

4.2 Climate policy, finance, and the UNFCCC

Climate policy at the UNFCCC can have two important implications: First, from a law perspective, the UNFCCC can provide a framework for the interpretation of existing TRIPS flexibilities and other additional and/or existing regional trade agreements in the climate context. Second, from an economic perspective, the direct transfer and financial mechanisms may strengthen the demand for climate technologies, directly and indirectly, by encouraging the commitment of developing nations to adopt more stringent climate policies. Larger national commitments may help redirect domestic demand toward climate-friendly technology, including domestic ones.

This study has shown that the demand side is a key driver of ITT and innovation and appears to precede IP as a pre-condition for climate innovation, especially but not exclusively in the context of developing countries. It had been argued that existing financial and technical mechanisms in the UNFCCC primarily focus on the

[42] In May 2022, the USPTO announced the launch of a Climate Change Mitigation Pilot Program that includes a prioritised examination of climate technologies. https://www.uspto.gov/about-us/news-updates/uspto-announces-launch-climate-change-mitigation-pilot-program.

transfer of climate technologies from developed to developing countries but may be less suited as means to promote ITT from developing countries (Corvaglia, 2014). For example, the Clean Development Mechanism (CDM) or Joint Implementation (JI) projects exclusively focus on transferring technology from developed to developing countries, while mechanisms for technology exports from developing and emerging countries are largely absent.

4.2.1 Legal interpretations

International climate agreements and international trade policy (including the TRIPS Agreement) differ conceptually. While international cooperation within the UNFCCC builds on voluntary cooperation, the standards set by the WTO are mandatory, including legal enforcement mechanisms. However, the increasing number of successful cases of climate litigation gives evidence that the UNFCCC, national climate laws, and NDCs can be successfully leveraged as a basis for interpretation in court decision-making (Wegener, 2020). Thus, there may be scope to leverage UNFCCC clauses for the interpretation of TRIPS exemptions, such as the waiver conditions, and for decisions by the Dispute Settlement Body.

A challenge in the potential alignment of the UNFCCC and the TRIPS/WTO treaties relies on their conceptual differences, which was also highlighted by the interviewees (Section 4.4.1). The WTO rules are motivated by the idea of free trade, encoded in the principles of equal treatment. Members of the WTO are required not to differentiate across technology fields and origin of the invention. With the Doha Declaration, the WTO deviated from this principle, allowing exceptions for developing countries and specific technologies (pharmaceuticals) (Cheng, 2022).

The Doha Declaration also acknowledged the need for technology transfer from developed to developing countries and established the Working Group on Trade and Technology Transfer (WGTTT) with the mandate to work out recommendations of how ITT could be realised in practice.

In contrast, the UNFCCC adopts a structuralist view acknowledging a *'common but differentiated responsibility'*, that accounts for differences in the level of development, capabilities, and historical responsibility for climate change (Oh, 2019). In addition, to achieve its objectives through economic and technological policy, climate agreements naturally discriminate against carbon-intensive products and technology.

The debates around climate change challenge the utilitarian rationale of TRIPS, and raise the question whether climate technology needs to be treated differently by IP law, policy, and administration (Cheng, 2022; Zhou, 2019). Technology transfer is one key pillar of the UNFCCC and over the years the mechanisms to facilitate the transfer have become increasingly elaborate. However, it has been argued that the terminology in the UNFCCC is too vague to assess whether the technology transfer-related obligations of developed countries are met (De Coninck and Sagar, 2015). Despite the broad framework needed for technology transfer set by the UNFCCC, the relevant formulations are vague, which also undermines their usefulness as an interpretative basis for TRIPS and other trade agreements.

Zhou (2019) argues that the fragmentation of the WTO and the UNFCCC into two separate domains of international policy prevents the effective realisation of synergies between the two frameworks. The author suggests that the UNFCCC and WTO institutions should coordinate better to make the existing mechanisms more effective. For example, they could outline in detail the extent to which specific climate technologies qualify as a public good. The UNFCCC could be established as authority to interpret the ITT provisions in the TRIPS Agreement, whenever climate technologies are concerned.

Further, recent years have given rise to an increasing number of bi- or plurilateral Preferential Trade Agreements (PTA). It was already discussed at the UNFCCC to adopt general clauses to ensure, that any international agreement on IP *'shall not be interpreted or implemented in a manner that limits or prevents any Party from taking any measures to address adaptation or mitigation of climate change, in particular the development and enhancement of endogenous capacities and technologies of developing countries and transfer of, and access to, environmentally sound technologies and know-how'* (UNFCCC, 2010). Such clauses may guide the interpretation and design of existing and future agreements. So far, clear statements regarding IP were not adopted in the final text, mainly due to the resistance by developed countries (Zhou 2022).

National climate law and NDCs may be used as interpretive aids for amendments to IP law much like climate litigation (Wegener, 2020). Climate litigation is a very nascent field, but it may be further explored whether and how the legislations and commitments may be designed to help overcome IP-related barriers, whenever they arise.

References to technology transfer within the TRIPS and UNFCCC agreements exclusively refer to technology transfer from the developed to developing countries, and ignore the possibly critical role of climate technology transfer originating from developing and emerging countries (Brewer, 2008; Corvaglia, 2014). A more explicit acknowledgement of the importance of technologies from less developed countries could guide and promote legislation supporting this dimension.

Further, the UNFCCC could explicitly acknowledge the relevance of technology transfer among developing countries and differences in the required capabilities for climate technology production. This could offer a basis for the interpretation of trade treaties to allow for discrimination favouring developing countries.

4.2.2 Technology transfer

Since the inception of the UNFCCC in 1992, a wide range of mechanisms and institutions to support the transfer of climate technology from developed to developing countries exists. Article 4.5 of the UNFCCC requires developed countries to facilitate technology transfer to enable developing countries to meet their commitments, and Article 4.7 is the clause that allows developing countries to make their commitments contingent on technological and financial support from developed countries. Later agreements specified more detailed mechanisms such as the CDM and JI in 1997, the TNA, the Technology Mechanism (TM) in 2010, and the Technology Framework in the Paris Agreement (Abdel-Latif, 2015; Zhou, 2019).

Among the existing tools, the TNA can be very effective in the context of IPRs and ITT. The TNAs, established in 2001, provide a base to understand country-specific technological needs and to create action plans for technological development. So far, two rounds of TNAs were conducted covering more than 80 countries. The TNAs could be used to assess whether IPRs are a barrier to meet specific needs and might serve as a basis for the potential activation of TRIPS waivers. However, in case the TNAs would be used as a legal mechanism, they would have to become more frequent, more systematic, and principles to ensure objectivity would be needed. This could be a complicated process, especially given the low relevance of IPRs in general.

A general shortcoming of the existing mechanisms is their focus on transfer from developed to developing countries, ignoring the increasing relevance of developing and emerging countries as sources of climate technology (Corvaglia, 2014; Brewer, 2008). While this reflects the rationale of the UNFCCC of a differentiated responsibility and burden sharing, the exclusivity may be inefficient in speeding up the global diffusion of climate technologies for four major reasons.

First, climate technology developed by inventors from lower income countries may be more suited in a developing country context. Second, climate technologies produced by lower income countries may be significantly. Third, supporting climate innovation in developing and emerging countries may increase the commitment to climate policy as it becomes an economic opportunity. Fourth, technological solutions developed in developing countries contribute to the building of relevant technological capacities. A revision of the existing mechanisms of the UNFCCC could account for this to promote climate technology transfer *from* developing countries. For example, technologies from countries below a certain development level could be directly supported whenever they represent a viable solution. The TNA may give guidance.

Further, some mechanisms like JI or CDM already incorporate elements of local capacity building, for example by promoting the cooperation between actors from developed and developing countries. The early implementations of the mechanisms showed a poor performance regarding the delivery of verifiable emission reductions, their contribution to stimulate climate investments from the private sector and to promote technology transfer and innovation in developing countries. The participation in CDM projects was very unequally distributed, with a concentration on four host countries (China, India, South Africa, Brazil) and low participation rates of Least Developed Countries (LDC) (Corvaglia, 2014; Kainou, 2022; Lo and Cong, 2022).

The CDM (and JI) mechanisms may be reconsidered putting more emphasis on long-term capacity building of project partners in developing countries, for example through well-calibrated local content requirements (LCRs), incentives to collaborate with local firms, or training requirements (Corvaglia, 2014). LCRs are controversial and should be limited to components that can be produced locally or in other developing countries with a similar development level at a sufficient quality and reasonable prices. Successful catch-up histories from China, India, and Brazil suggest that often these requirements have been complemented by other means of industrial policy (Fu, 2011; Cheung and Ping, 2004).

The possibilities of small- and medium-sized local businesses and LDCs to participate in the CDM can be improved by reducing administrative burdens and/or transforming these mechanisms to become low-carbon investment support instruments with fair and transparent access rules. However, proving climate additionality becomes more challenging when lowering the participation hurdles. This could be addressed by differentiating the certification criteria by level of development of the host country and projects size. The mechanisms may also be tailored more closely to the (conditional) commitments stated in the NDCs. This could help make technology transfer and mitigation contributions more explicit (Zhou, 2019).

Similar mechanisms may be developed to promote more technological cooperation between developing countries, for example through technology transfer, trade, and partnerships in R&D and deployment.

Further, the Paris Agreement opened a door for the greater incorporation of non-market approaches, including NbS. In some cases, these solutions represent superior substitutes for imported climate technology from the developed countries. A systematic review of the existing mechanisms could help assess whether and how the existing mechanism sufficiently account for non-market solutions and how existing support and transfer mechanisms can redesigned to create a level playing field between market and non-market solutions from both developed and developing countries. The Subsidiary Body for Scientific and Technological Advice (SBSTA) could be mandated to undertake such an assessment, potentially collaborating with the TNA or building on its country-specific expertise.

4.2.3 Financial mechanisms

Climate finance may be a key mechanism to motivate the commitment of developing countries to engage more in mitigation. It could also make mitigation be an economic opportunity in these countries by supporting upfront investments, for which domestic financial means are often lacking. Adaptation finance is conceptually different and may be considered as a means of compensation for incurred damages and to strengthen global resilience.

Within the UNFCCC, there are various financial mechanisms and facilities such as the Global Environmental Facility (GEF), the Green Climate Fund (GCF), and special funds for adaptation and LDCs. In the context of the Paris Agreement, it was aimed to strengthen the linkages between the Finance Mechanism and the Technology Mechanism. Here, we briefly outline how these existing tools may become more targeted towards supporting technology transfer and domestic innovation.

Regarding IPRs and patents, it was proposed that climate finance could be used for patent buyouts. This means the acquisition of IPRs or licences of specific technologies to make them available at reduced fees, potentially with preferential access for developing countries and public entities (De Coninck and Sagar, 2015; Zhou, 2019; Maskus, 2010). Maskus (2010) suggested that a global emissions-reduction fund (GERF) could be created, analogously to the Global Health Fund, to provide incentives to develop climate technologies for specific mitigation needs in developing countries. The instruments could be a mix of direct grants, prizes, and geographically

limited patent buyouts, but also subsidies for ITT and local implementation.

The need for patent buyouts may be explored in cases where IPRs truly represents a barrier. However, given the low relevance of IPRs, it may be an inefficient instrument, as often cheaper solutions exist that are not subject to IPR-related constraints. Further, general buyouts would likely be insufficiently targeted as technological needs vary across countries and other instruments such as needs-based TRIPS waivers could be the narrower and more specific instruments. However, the political feasibility of TRIPS waivers may be lower. Whether IPRs on a specific technology represents a barrier is often country-specific. Thus, potential buyouts would need to be locally and technologically specific.

Generally, climate finance is often considered as a lever to mobilise private finance. While it remains true that financial incentives matter, analyses from an innovation ecosystem perspective suggest that climate finance should go beyond the provision of financial incentives as other barriers to adaptation and mitigation prevail. In addition to using climate finance to support deployment of technology, it may also be used to support demonstration and pilot installation projects, which contribute to local capacity building and testing of domestic and foreign technology in the context of developing countries. This may be particularly helpful to assess requirements of adaptive innovations in existing technology.

Climate finance could also be used to fund institutions that support knowledge exchange and networking among technological practitioners, which are relevant components of a domestic innovation ecosystem. Funds could be also made available for risky projects in hard-to-abate emission reductions, which are difficult to finance due to the uncertain outcome regarding their realised emission reductions and economic viability. The risk eligibility criteria of projects could be revised taking account of the inherent uncertainty of innovation outcomes (Ryan Hogarth, 2012; Warren, 2020). It can be learned from existing initiatives that provide risk capital to innovation in development projects such as the public-private initiatives The Lab[43], which is, among others, supported by the German Federal Ministry for Economic Affairs and Climate Action, or the Global Innovation Fund.[44]

The results of this study suggest that the demand side may be more significant to speed up the low-carbon transition, as most technological solutions do already exist. This should be reflected in the allocation of budgets for climate finance. Demand side instruments include, for example, deployment subsidies and support for public procurement and investment, possibly allowing for local content or training requirements whenever they can contribute to local capacities. Public funding is particularly needed in areas where private incentives are lacking. This is for example true in the case of adaptation projects to the benefit of the public, such as seawalls or adaptation in urban infrastructure. Public procurement for adaptation could also be targeted towards indigenous innovation to enhance domestic technological capacities for locally specific adaptation solutions.

[43]https://www.climatefinancelab.org/

[44] https://www.globalinnovation.fund/

6 Conclusions

This study reviewed the relationship between IPRs, innovation in climate technologies and sustainable development. Based on a systematic screening of the economic and legal literature, we identified three core areas where IPRs and climate technology interact. First, IPRs could promote ITT through the channels of trade and FDI; second, IPRs can stimulate or hinder indigenous domestic innovation in climate technologies; and third, IPRs interact with adaptive and imitative innovation that is often needed to make existing climate technology better suited to the local context.

Based on a literature review and semi-structured experts from four developing countries (Bangladesh, India, Kenya, and South Africa), the key results of the study can be summarised as follows:

- The heated discussion about IPRs in the climate context does not reflect its actual relevance for combating climate change. More attention should be paid to the demand side. The key constraint that hinders developing countries in widely deploying climate-technologies is not related to IPR but costs. Demand side policies should aim at reducing costs.

  Both the literature and interviews suggested that the focus on IPRs is distracting. The debate about IPRs dates back to the 1990s, when many technological solutions were not yet developed. Hence, there was a significant need for the development of climate technologies at the supply side. 30 years later, the key challenge is technology diffusion. Also the literature is biased in this regard, and most innovation research has focused on technology supply.

  While most climate solutions are in their maturity stage or relatively low-tech, there are potential exceptions in which IPRs matter, such as recent advances in hydrogen, biofuels, and GM crops. Given the conceptual difficulties in defining the boundary of *'climate technology'* (see Practical Considerations in Section 5.2.1), the range of cases where IPRs matter can change. Although this study concludes that IPRs have little relevance for most climate solutions that are relevant in developing countries, future studies are needed to address the special cases separately.

Box 3: Relation to COVID-19

The debate on IPRs in the context of climate technologies was refuelled by recent discussions about the TRIPS waiver for IP-protected COVID-19-related medical products, including vaccines. Proponents who advocated relaxing IP protection argued that the climate crisis should be considered as an analogue to the global health crisis of COVID-19 and that IPRs waivers should be analogously applied. In the interviews, various comparisons and contrasts were drawn between COVID and climate change, and the conflicting attitudes participants expressed signal to the complex nature of these issues.

The key analogies and differences between both discussions can be summarised as follows:

Analogies: For both climate and COVID-19 technologies, IPRs is not the key barrier to the production, innovation, and diffusion in developing countries. Instead, the lack of a sufficient absorptive capacity including technological capabilities, relevant supply chains, and manufacturing capacities, before IPRs may become a relevant factor. Hence, in both cases, the heated discussion on IPRs is likely rather distracting than helpful to address the most urgent problems.

Differences: (1) COVID-19 medicals were a supply side problem, while climate technologies suffer from the lack of demand. In the climate context, the technological solutions already exist for most problems, but their diffusion is sluggish due to an insufficient demand. This was different for COVID-19, where the technological solutions were not yet available at the peak of the crisis. (2) Climate and COVID-19 technologies are heterogeneous. While pharmaceuticals and medical products are generally very IP-intensive sectors, most of the relevant climate technologies are not and IP-licensing fees are a minor cost factor compared to capital costs, if they occur at all. Many technologies are already mature and no longer IP protected and/or low-tech and NbS exists. (3) The market structures are different: For most climate technologies, the markets are competitive with multiple substitute technologies. Hence, arguments about excessive pricing due to the abuse of patent-induced monopoly rights do not hold.

These analogies and differences reaffirm the general conclusions of this study, stating that IPRs is likely not the bottleneck in speeding up the global diffusion of climate technologies.

- The key reasons why IPRs are not an issue for climate technologies in developing countries are the following:
    1) Many relevant climate technologies are old, and previous patent protection has expired. Further, the majority of climate problems can be addressed with low-tech or NbS, which bear several advantages compared to high-tech alternatives: Often, NbS and low-tech solutions are much cheaper; NbS often bear many co-benefits, e.g. biodiversity; they are easier to maintain under local conditions; and looking at the NDCs, low-tech often are sufficient to meet the goals.

       NbS and low-tech solutions are less prominently discussed in the literature, which may indicate a bias in the attention they received so far. The NbS literature is rather nascent and there are difficulties of empirical measurement. Similarly, also the database for tracking the diffusion of low-tech climate solutions is poor, which naturally leads to a bias in the empirical economic literature.
    2) Worries about excessive pricing arising from technological monopolies of patent holders often do not apply because many competitors offer alternatives.
    3) There may be few exceptions where IPRs might play a role, and it may be proven whether there is a case of including them in the TRIPS flexibilities. But this is subject to the following considerations: First, it is challenging to define eligibility criteria for specific technologies and countries, and second, if exceptions were only allowed for LDCs, the TRIPS waivers are likely not to have a large impact due to lacking technological capacities in these countries.

- Technology transfer: The relationship between IPRs and climate technology transfer and FDI is contingent on the level of development. Stringent IPRs can promote technology transfer and FDI, but only at higher level of development, i.e. after certain pre-conditions are met. Interviewees from Kenya and Bangladesh stated that IPRs in their countries do not play a role, which is consistent with the literature.

  Moreover, existing mechanisms for ITT in international agreements including the UNFCCC and WTO are not effective: mechanisms with exceptions for LDCs are not effective because these countries are confronted with other issues and need to build up absorptive capacities first.

  Further, FDI projects in developing countries are often not IP-driven and targeted towards natural resource extraction or low-cost manufacturing projects. This rarely implies a transfer of relevant technology and knowledge. Existing clauses for the promotion of ITT and FDI are too unspecific to be effective, and targeting policies that promote FDI as a vehicle of technology transfer require further specifications. To make FDI more effective as a means of diffusing climate technologies globally, existing FDI support policies need to

be more targeted.

Industrial policy measures that enforce a greater technological collaboration and knowledge transfer between foreign and local firms could be effective tools to promote technological learning and the creation of domestic industrial and technological capacities. Public FDI support could be redesigned to make joint learning happen. The JI mechanism of the UNFCCC framework could provide a template.

- Indigenous innovation: IPRs can be an enabling factor within a climate-friendly innovation system, but they are not found to be a driver of innovation and R&D. This was clearly found in the interviews (including interviewees from India), and the empirical literature is not unambiguously supportive, differently from the theoretical innovation literature in economics.

  A functioning innovation system for climate technologies needs to be built first; after that, IPRs can play a role therein. Key factors that emerged are demand-pull factors, especially costs and regulation. Climate technologies need to be either cheaper to deploy than fossil-fuel based alternatives and/or an adequate climate regulation is needed.

  For the creation and support of local innovation systems, lower-level means of IPRs protection such as trade marks and utility models are preferable as they are more accessible for inventors from developing countries. Trade marks do not protect inventors' IP, but they are relevant as a marketing tool that enables inventors to appropriate the gains of investments in quality and product developments. Trademarks also facilitate (international) climate technology diffusion because they are signals of quality and help create consumer trust.

- Follow-on adaptive innovation: IPRs can inhibit adaptive innovation and the diffusion of these inventions due to the novelty trap. Inventors and investors risk infringing pre-existing international IP if they engage in developing and upscaling adaptive innovation, which is often low-tech and a minor amendment of an existing technology.

  In a domestic context, this does not necessarily hinder in the production of adaptive innovations. But it impedes the international diffusion of these low-cost, low-complexity solutions, which may often be better suited for the development context compared to high-tech solutions from developing countries.

  Diffusion patents were proposed as an instrument to address the novelty traps, but it may be considered whether international IP law could be amended to promote (or not hinder) the diffusion of climate-related adaptive innovations from developing countries more effectively. However, there are many kinds of adaptive innovation that are not subject to IPRs restrictions, including organisational, frontend, and service innovations. The existing international mechanisms to promote ITT could pay greater attention to the international diffusion of these solutions.

- Climate technologies from developing countries: Developing and emerging countries entered the market for climate technologies. This is poorly reflected in existing agreements, and few mechanisms exist that promote transfer of climate technology originating from these countries. The rise of developing and emerging countries as important source countries of climate technologies requires a shift of the attention from IPRs to trade and investment policy debate. This would not only help speed the diffusion of low-cost climate solutions that suit the developing country context. It would also support innovation and sustainable development in developing countries and would make them become a more active player in the growing global market for climate technology.

  Trade policies could be designed to promote transfer of climate technologies originating from developing countries, for example by the reduction of tariff and non-tariff barriers to trade. Existing trade agreements with environmental provisions often exclude developing countries from active participation. This could be addressed by revising the eligibility criteria that define climate products allowing for a differentiation by the level of development.

Annex 543

A. Opal & J. Nathwani, *Global energy transition risks: Evaluating the intergenerational equity of energy transition costs,* in ENERGY DEMOCRACIES FOR SUSTAINABLE FUTURES, ed. M. Nadesan et al. (Academic Press, 2023), pages 301-310

The complete book can be accessed through the Delft University of Technology Library (*see* TU Delft Library catalogue, available at: https://tudelft.on.worldcat.org/search/detail/1347024571?queryString=ENERGY%20DEMOCRACIES%20FOR%20SUSTAINABLE%20FUTURES (last accessed on 12 March 2024). The Delft University of Technology Library can be contacted for assistance by phone (at +31 (0)15 27 85678) or email (at library@tudelft.nl)

Energy Democracies for Sustainable Futures

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CHAPTER

32

Global energy transition risks: Evaluating the intergenerational equity of energy transition costs

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1 Introduction

Sovacool and Dworkin define energy justice as "a global energy system that fairly disseminates both the benefits and costs of energy services, and one that has representative and impartial energy decision-making" [1]. Fairly disseminating the benefits and costs of energy services means disseminating across several dimensions such as geography, economic class, age, gender, and—the focus of this chapter—time.

Climate change and its impacts will manifest over time across several generations. Mitigation and adaptation measures that are taken in the near term will affect future generations, and the severity of impacts will vary depending on the efficacy of the chosen interventions. Intergenerational equity, similar to considerations of temporal energy justice, rests on the principle that all generations, present and future, must have similar "options, quality, and access" to natural and cultural resources, and actions of one generation must not compromise future generations [2]. Applying intergenerational equity means that decisions made today must be balanced by the impacts and requirements of future generations.

As global temperatures rise, the primary effects on physical, social, and economic security will become more pronounced. Hsiang et al. estimate that for each degree of global warming, states will see a loss of 1%–20% of their annual economic output [3]. These losses will not be shared equitably across generations, with loss increasing proportionately to a rise in temperature. On the other hand, current generations will bear a larger economic burden, such as investment in mitigation and adaptation measures and addressing the inherited burden of past generations' inaction.

In this chapter, we explore and compare the economic burdens faced by different generations due to additional costs needed to finance the global energy transition and economic

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losses due to global warming, as well as discuss democratic policy mechanisms that could be used to generate a sufficient level of investment. In order to meet the global climate targets, current and near-term generations will shoulder a disproportionately large burden to finance the transition to a low-carbon global energy system. Future generations will not only benefit from these early investments but will also face profound and disruptive economic and social dislocations associated with the rising global temperatures [4]. We analyze the distribution of these economic impacts across generations to determine intergenerational financial equity. Three scenarios will be tested: (1) climate action beginning in 2020 sufficient to limit global warming to 1.5°C, (2) delayed climate action beginning in 2030, and (3) delayed climate action beginning in 2040. The Haudenosaunee "Seven Generations Principle" will be applied, and in the analysis we consider a span of seven generations starting from 2020, with an assumption of approximately 20 years per generation [5].

2 Analysis

Public electricity generation and heating creates approximately 41% of global carbon emissions, making it the largest single sector contributor to climate change [6]. A rapid and deep decarbonization of global energy systems is necessary to avert severely adverse impacts on social and natural systems associated with global warming.

The Intergovernmental Panel on Climate Change (IPCC) special report on global warming above 1.5°C outlines the potential global emissions scenarios, mitigation pathways, and impacts of global warming on natural and human systems. The IPCC's modeling results suggest that to stay below the 1.5°C threshold, global electricity and heating generation must come from 51% renewable sources by 2030, 77% by 2050, and almost 100% by 2100. The current share of supply generated by renewable sources in 2020 is 26% [7].

Fig. 32.1 shows that the shift to renewable energy must be rapid in the first 20–30 years, and the rate of change slows over time. This means different generations bear varying amounts of

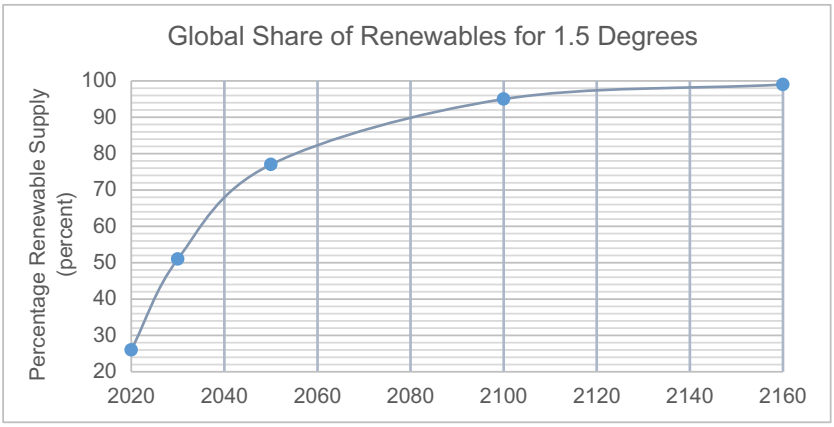


FIG. 32.1 Global renewable supply necessary for limiting warming to 1.5 degrees.

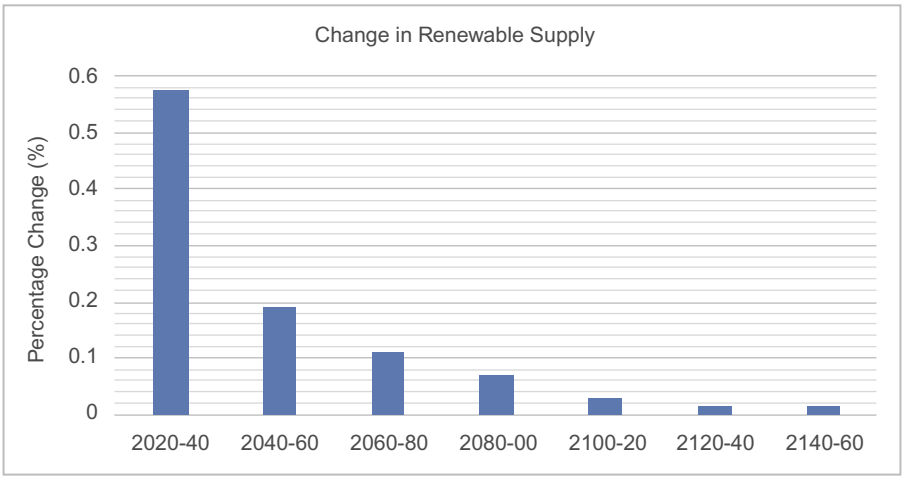


FIG. 32.2 Percentage change in renewable supply required per generation.

responsibility for replacing the existing nonrenewable energy infrastructure. In Fig. 32.1, it is assumed that the global share of renewable supply would be 95% in 2100, and 99% in 2160. Fig. 32.2 shows the relative change in renewable energy supply for which each generation will be responsible.

This distribution, however, assumes that the cost of renewable technology and its installation will remain constant over time. For a more accurate distribution of costs across generations, the change in renewable technology cost must be accounted for, as well as the discount rate. For further analysis, a 2% annual decrease in renewable technology cost and a 1% discount rate is assumed [8–10].

The IPCC estimates that an additional $830 billion 2010 US dollars (or $991.13 billion 2020 US dollars) must be mobilized globally per year between 2016 and 2050 in order to finance the energy infrastructure and technology to limit warming to 1.5°C [7]. This includes low-carbon or renewable energy technology and energy efficiency improvements. It will be assumed that the $991.13 billion annual cost extends to 2060 for the purposes of this analysis, leading to a total investment requirement of $39.645 trillion USD until 2060. The IPCC does not predict additional investment amounts beyond 2050, so it will be assumed that additional investments after 2060 are proportional to the change in percentage supply of renewable energy as shown in Fig. 32.2. Incorporating the 2% annual decline in renewable technology cost and 1% discount rate, the distribution of cost (in 2020 dollars) would be as follows. The total additional cost for financing energy transitions to limit warming to 1.5°C is calculated to be $42.492 trillion US dollars until the year 2160.

It is important to note that this cost estimate is only for one portion of the energy sector and therefore represents only a small portion of the total investment required for climate change mitigation. Cost estimates for overall climate change mitigation, adaptation, and damages range from tens to hundreds of trillions of dollars, and cost estimates for the energy sector in total are approximately $100 trillion until 2050 [11] (Table 32.1).

TABLE 32.1 Distribution of energy transition costs per generation.

Generation	Percentage of responsibility	Additional cost (billion $/year)	Total additional cost (billion $)
2020–2040	78.8	1674.21	33,484.17
2040–2060	14.5	308.84	6160.83
2060–2080	4.6	97.24	1944.84
2080–2100	1.6	33.65	673.01
2100–2120	0.35	7.45	149.05
2120–2140	0.10	2.06	41.26
2140–2160	0.03	1.14	22.85

The analysis thus far shows that earlier generations will face a disproportionately large cost burden to finance the global energy transition. On the other hand, generations further in the future will face larger climate risk and economic cost due to impacts of global warming. Fig. 32.3 shows the IPCC's global surface warming projections until 2300. As this chapter assumes that humanity is successful in limiting global warming to 1.5°C by 2160, approximately the bottom edge of scenario B1 is used for modeling purposes.

Hsiang et al. estimates that the United States will see a GDP loss of 1.2% per degree of warming per year associated with global warming [3]. For developing countries, Hsiang et al. estimates that the GDP loss will be 2%–20% per degree per year [3]. Kompas et al. estimate GDP losses between 0.144% and 7.98% per year in the long term for 1–2 degrees of warming [13]. For this chapter, a global estimate of 2% GDP loss per degree per year will be assumed. Since electricity and heating systems produce 41% of global emissions, $2 \times 0.41 = 0.82\%$ will be the assumed GDP loss due to electricity and heating system global warming contributions. It

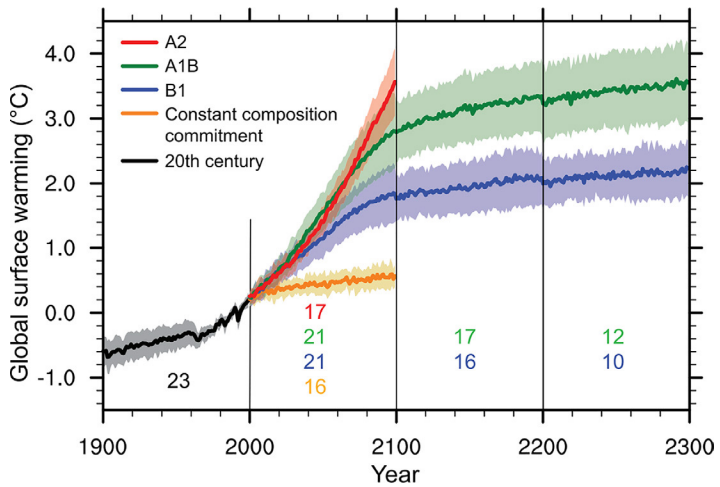


FIG. 32.3 IPCC climate projections to 2300 [12].

TABLE 32.2 Total GDP and GDP losses due to energy transition and global warming per generation.

Generation	GDP per year ($ trillion USD)	GDP loss from energy transition (%)	GDP loss from global warming (%)	Total GDP loss (%)
2020–2040	142	1.18	0.30	1.48
2040–2060	173.27	0.178	0.46	0.633
2060–2080	211.42	0.0460	0.70	0.746
2080–2100	257.97	0.0130	0.88	0.888
2100–2120	314.77	0.00237	0.98	0.982
2120–2140	384.08	0.000537	1.02	1.02
2140–2160	468.65	0.000244	1.05	1.05

is assumed that the total proportion of emissions due to electricity and heat remains constant at 41% over time. Historical proportional emissions can be found in Ref. [14].

It is also assumed that the global GDP growth will be 1% per year between 2020 and 2160. While this assumption is likely not accurate in the short-term (global GDP growth was 2.48% in 2019), a 1% assumption will be used due to declining rates of GDP growth and the uncertain sustainability of long-term economic growth due to climate change [15]. Table 32.2 shows the estimated GDP at the beginning of each generation and the percent of total GDP loss due to the electricity and heating component of global warming, which is calculated from the following equation:

$$\text{Percentage GDP loss from global warming per year} = \left(\begin{array}{l}\text{GDP} \times \text{degrees warmed} \times 2\% \text{ GDP loss per degree} \times \\ 41\% \text{ emissions from electricity and heat}\end{array}\right) / \text{GDP}$$

Table 32.2 also converts the total additional investment cost for the energy transition (as shown in Table 32.1) to a proportion of GDP, and the total GDP percentage loss per year for each generation.

3 Evaluation

Fig. 32.4 shows the distribution of the intergenerational financial burdens associated with the electricity and heating sector, measured in GDP loss per year.

This analysis shows that the current generation (2020–2040) faces the largest financial burden regarding energy transitions out of the next 7 generations, almost 1.5 times higher than the next highest generation in 2140–2160. The following generation, from 2040 to 2060, faces the lowest financial burden, and subsequent generations face an increasing burden per generation. Thus, in order to limit global warming to below 1.5 degrees, the intergenerational financial burden will not be equal.

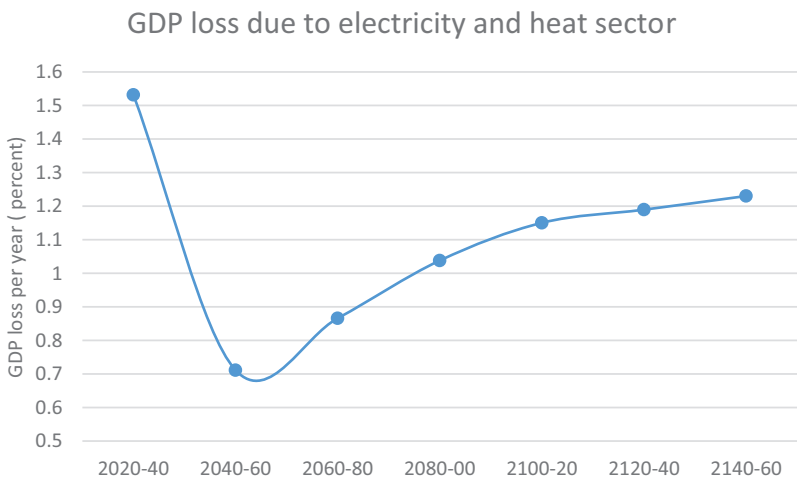


FIG. 32.4 Total GDP loss per generation due to the electricity and heating sector.

The high financial burden on the current generation is in part due to the historical inaction by previous generations. Sanderson and O'Neill calculate that delayed action on climate change mitigation increases costs by $0.6 trillion USD per year in 2020 [16]. It is tempting to delay mitigation further since over time GDP increases, the cost of renewable technology decreases, and the principle of discounting makes future investment more attractive than present investment. However, delayed action will contribute to higher cumulative costs over seven generations.

To evaluate the intergenerational cost of delayed action, the model was used to calculate the GDP losses per year if action was delayed until 2030 or 2040. Global warming values due to delayed action were taken from Schaeffer et al. [17]. It was assumed that 50% of the 2020–2040 infrastructure costs would be shifted to the 2040–2060 generation in the 2030 start scenario, and 100% in the 2040 start scenario. The following graph shows the intergenerational financial burdens due to the infrastructure and climate effects of the heating and electricity sector if significant action starts in 2020, 2030, and 2040 (Fig. 32.5).

Two main insights can be gathered from this figure.

(1) As action is delayed, the cumulative financial impacts of climate change increase, a fact supported by many including [18]. The cumulative financial burden can be represented as the area under each of the curves, which is 6.36 for action started in 2020, 8.53 for 2030, and 9.56 for 2040. This means that over seven generations, if action is delayed by 10 years, the world will cumulatively have to spend 25.4% more to mitigate and adapt to climate change in the electricity and heating sector, and if action is delayed by 20 years, cumulative spending will be 33.5% higher.

(2) The generation that benefits the most from delayed action is the current generation, as the GDP per year losses decrease drastically for the 2020–2040 generation as action is delayed further. On the other hand, the generation that would be adversely impacted most by delayed action is the following generation—our generation's children.

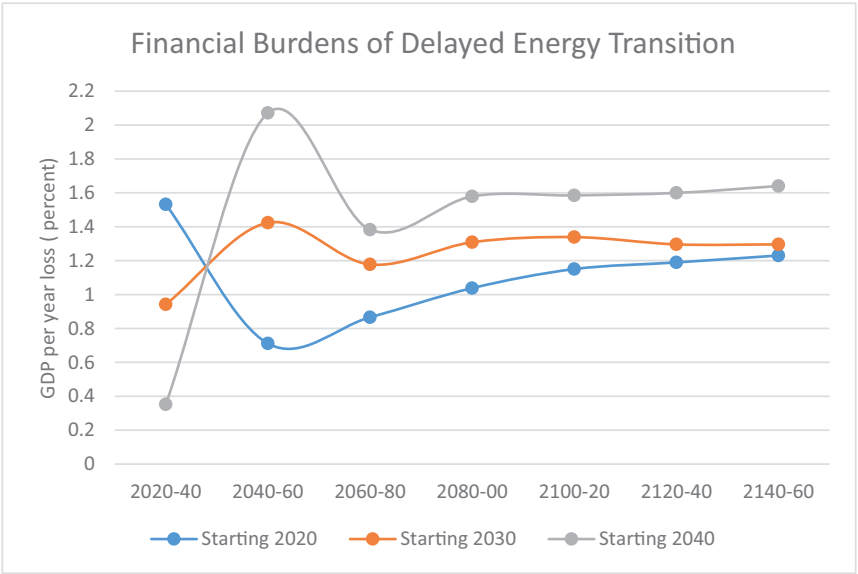


FIG. 32.5 Intergenerational trends in energy transition financial burdens, current and delayed action.

The purpose of this analysis was to determine the trend in intergenerational financial burdens associated with energy transitions. The specific values calculated are highly uncertain and sensitive to assumed values, though the model was tested to ensure it was not highly sensitive to changes in assumed values. The model's assumptions and limitations are listed here.

(1) The model only looks at costs and impacts in the public electricity and heat sector, but does not include other elements of energy such as transportation and industrial processes.
(2) The model assumes a GDP growth of 1% per year for the period of 2020–2160.
  (a) This is an assumption of the average GDP per year between 2020 and 2160, based on long-term scenarios modeled by Leimbach et al. [19].
(3) The model calculates the total additional costs regarding the global electricity and heat sector transition to be $42.492 trillion USD (in 2020 dollars) between 2020 and 2160.
  (a) This value is roughly equivalent to or lower than other estimates of additional costs for the global energy transition (for example, $23 trillion to 2050 in IRENA [9] and $73 trillion total in Jacobson et al.) [20].
(4) The model assumes a decrease in renewable technology cost by 2% per year and a 1% discount rate [8,10].
(5) The model assumes that the electricity and heating sector will retain a 41% share in global emissions between 2020 and 2160 [6].
(6) The model does not account for other major costs in the electricity and heat sector, such as stranded assets in the fossil fuel sector, or the social cost of carbon.
(7) The IPCC values and predictions that were used in this report have inherent uncertainties.

4 Recommendation—Cap-and-invest

The analysis above shows that significant investment is needed between 2020 and 2040 in order to meet the electricity and heating system changes required to limit global warming to 1.5°C. Future generations have a significantly smaller investment burden but face increasing GDP losses due to effects of global warming. This analysis answers the question of when investments should occur, but not the question of how. Current financing strategies and policies in place are not on track to meet the scale of investment required, at least for the period of 2020–2040.

Nathwani and Ng propose a "cap-and-invest" strategy that would cap emissions at the maximum levels allowed under decarbonization goals necessary to remain within 1.5-degree warming pathways and invest in mitigation and innovation initiatives to adhere to these goals [21]. The cap-and-invest strategy is based on a General Environmental Tax (GET) that would "[create] a large 'pool of capital' to de-risk investment in emerging low-carbon solutions in support of an energy infrastructure resilient to the threat of climate change." The general environmental tax (GET) would be an economy-wide tax on consumption, whose revenues would flow into an Environmental Trust Fund (ETF), a fund intended to reduce the intergenerational effects of climate change. The ETF would be governed at arm's length from government entities to ensure disengagement from politics and short time horizons. ETF funds would be allocated to private, public, and community climate mitigation initiatives that drive innovation in the clean technology industry and/or support global decarbonization goals. The concept of public trust funds intended to benefit future generations is similar in principle to state-managed pension funds such as the Canada Pension Plan or the Government Pension Fund of Norway.

To be successful and equitable, the GET and ETF instruments would need to support the democratization of energy systems. We recommend five principles on which to base the development and implementation of the GET and ETF [22].

(1) Citizens are politically engaged and are provided with democratic mechanisms for participation in and engagement with the GET and ETF.
(2) Principles of social justice and inclusion are used to develop the GET and ETF.
(3) The GET and ETF are publicly controlled and disengaged from politics and government.
(4) The ETF is used primarily to support local and community initiatives.
(5) The use of ETF funds is decided through participatory and community planning.

In order to limit warming to 1.5 degrees and reduce cumulative impacts, action must be taken now. The concept of an economy-wide consumption tax and arm's-length governance for a public trust fund is one example of an equitable and democratic mechanism for distributing benefits and costs of climate change over generations.

5 Conclusions

This chapter shows that to limit warming to 1.5°C, financial burdens regarding the electricity and heating sector cannot be perfectly intergenerationally equal and energy just. Significant and disproportionate investment is needed in the short term to finance the

transition to renewable energy, and as the planet warms, future generations will see a continually increasing financial burden to adapt to climate change and global warming. One potential mechanism to amass the necessary short-term investment and long-term impacts is a cap-and-invest strategy that includes a General Environmental Tax on economy-wide consumption, as well as an Environmental Trust Fund that governs these funds to improve intergenerational climate equity.

The model presented in this chapter predicted distributions in intergenerational financial burdens for three scenarios: climate action beginning in 2020, and delayed action beginning in 2030 or 2040. It was found that if action is taken now, the current 2020–2040 generation would face the highest financial burden, and the 2040–2060 generation the lowest. If action is delayed, an increasing burden is placed on the next generation from 2040 to 2060, and cumulative costs over seven generations increase significantly. In short, if we do not take significant action now to catalyze the energy transition, we are harming at least the next six generations, most significantly the children of today. In order to promote energy justice and energy democracy, the intergenerational and temporal distributions of climate-related energy costs and damage must be accounted for, and powerful momentum for decarbonizing global energy systems must begin now.

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TRENDS AND PROSPECTS

Laurence Boisson de Chazournes
Cesare P. R. Romano
Ruth Mackenzie

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Dedication

This book is dedicated to the memory of Paul C. Szasz
(1929–2002)

Eminent Authority on International Law and Organizations,
Wise Mentor and Dear Friend

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ABBREVIATIONS

ACHPR	African Court of Human and People's Rights
ACP	African, Caribbean and Pacific
ADB	Asian Development Bank
AJIL	American Journal of International Law
AMU	Arab Maghreb Union
ASEAN	Association of South East Asian Nations
BIC	Inspection Committee of the Asian Development Bank Board
CACJ	Central American Court of Justice
CAO	Compliance Advisor Ombudsman of the International Finance Corporation and the Multilateral Investment Guarantee Agency
CIS	Commonwealth of Independent States
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
COMESA	Common Market for Eastern and Southern Africa
DSB	Dispute Settlement Body of the World Trade Organization
DSU	Dispute Settlement Understanding
EC	European Community
ECHR	European Convention on Human Rights and European Court on Human Rights
ECJ	European Court of Justice
ECOSOC	Economic and Social Council
ECR	European Court of Human Rights Reports
ECSC	European Coal and Steel Community Treaty
EFTA	European Free Trade Organization
ESA	European Surveillance Authority
ETS	European Treaty Series
EU	European Union
EUROPOL	European Police Office
FAO	Food and Agriculture Organization
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GPGs	Global Public Goods
IAEA	International Atomic Energy Agency
IBRD	International Bank for Reconstruction and Development
ICAO	International Civil Aviation Organization
ICC	International Criminal Court
ICJ	International Court of Justice

ICLQ	International and Comparative Law Quarterly
ICSID	International Center for the Settlement of Investment Disputes
ICTR	International Criminal Tribunal for Rwanda
ICTY	International Criminal Tribunal for the Former Yugoslavia
IDA	International Development Association
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
ILC	International Law Commission
ILM	International Legal Materials
ILO	International Labour Organization
ILOAT	International Labour Organization Arbitral Tribunal
IMCO	Inter-Governmental Maritime Consultative Organization
IMF	International Monetary Fund
IMO	International Maritime Organization
IOs	International Organizations
ITLOS	International Tribunal for the Law of the Sea
ITO	International Trade Organization
ITU	International Telecommunication Union
LNTS	League of Nations Treaty Series
MIGA	Multilateral Investment Guarantee Agency
NATO	North Atlantic Treaty Organization
NGOs	Non-Governmental Organizations
NYU	New York University
OAPEC	Organization of Arab Petroleum Exporting Countries
OAS	Organization of American States
OAU	Organization of African Unity
OHADA	Organisation pour l'Harmonisation du Droit des Affaires en Afrique
OJ	Official Journal of the European Communities
PCIJ	Permanent Court of International Justice
PICT	Project on International Courts and Tribunals
PLO	Palestine Liberation Organization
RCADI	Recueil des Cours de l'Académie de droit international de La Haye
RGDIP	Revue générale de droit internationale public
SALs	Structural Adjustment Loans
SC	Security Council / Sanctions Committee
SCM	Agreement on Subsidies and Countervailing Measures
SECALs	Sector Structural Loans
SICA	Central American Integration System
TACJ	Court of Justice of the Andean Community

TBR	Trade Barriers Regulation
TEU	Treaty on European Union
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
UN	United Nations
UNAMIR	United Nations Assistance Mission for Rwanda
UNAT	United Nations Administrative Tribunal
UNCITRAL	United Nations Commission of International Trade Law
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCHR	United Nations High Commissioner for Human Rights
UNHCR	United Nations High Commissioner for Refugees
UNIDO	United Nations Industrial Development Organization
UNIDROIT	International Institute for the Unification of Private Law
UNITAR	United Nations Institute for Training and Research
UNTS	United Nations Treaty Series
WB	World Bank
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WMO	World Meteorological Organization
WTO	World Trade Organization

INTRODUCTION AND ACKNOWLEDGEMENTS

INTRODUCTION

The increasing number of international organizations and institutions in every area of international cooperation is a noticeable characteristic of the international legal order at the beginning of the twenty first century. A partially related development is the multiplication of international dispute settlement bodies. These phenomena have gradually, but separately, attracted the attention of policy makers and scholars alike.[1] However, what has not yet attracted much attention is the relationship *between* international organizations and international dispute settlement bodies, more specifically the access of the former to the latter, as well as the possibility for international organizations to be brought before dispute settlement bodies by another party as respondent.

One aspect of the phenomenon of the multiplication of international organizations has been termed the "legalization of world politics."[2] The

[1] On the issue of proliferation of international judicial bodies see the *NYU Journal of International Law and Politics* special issue "The Proliferation of International Tribunals," Vol. 31, N. 4, 1999, pp. 679–970; Charney, J., "Is International Law Threatened by Multiple International Tribunals?," *Recueil des cours*, Vol. 271, 1998, pp. 101–382; Hafner, G., "Should One Fear the Proliferation of Mechanisms for the Peaceful Settlement of Disputes?," in Caflisch, L., (ed.), *Règlement pacifique des différends entre Etats*, The Hague, Kluwer, 1998, pp. 25–41; Boyle, A., "The Proliferation of International Jurisdictions and Its Implications for the Court," in Bowett, D., (ed.), *The International Court of Justice: Process, Practice and Procedure*, BIICL, London 1997, pp. 124–130; Thirlway, H., "The Proliferation of International Judicial Organs and the Formation of International Law," in Heere W., (ed.), *International Law and The Hague's 750th Anniversary*, The Hague, 1999, pp. 433–441; Treves, T., *Le controversie internazionali: Nuove tendenze, nuovi tribunali*, Milano, Giuffre,' 1999; Pinto, M.C.W., "Judicial Settlement of International Disputes: One Forum or Many?," in Anghie, A., (ed.), *Legal Visions of the 21st Century*, The Hague, 1998, pp. 465–475; Boisson de Chazournes, L., (ed.), *Implications of the Proliferation of International Adjudicatory Bodies for Dispute Resolution: Proceedings of a Forum Co-Sponsored by the American Society of International Law and the Graduate Institute of International Studies, Geneva, Switzerland, May 13, 1995*, Washington D.C., ASIL Bulletin No. 9., 54 pp. On the issue of the proliferation of international organizations, including judicial bodies, see Blokker N.M., Schermers H.G. (eds.), *Proliferation of International Organizations*, Dordrecht, Kluwer, 2001.

[2] On this topic, see the special issue of *International Organization* on "Legalization and World Politics," Vol. 54, N. 3, 2000, pp. 385–703. In that issue "legalization" is defined on the basis of three criteria: the degree to which rules are obligatory, the precision of those rules, and the delegation of some functions of interpretation, monitoring, and

attempt to impose international legal obligations on governments, in selected issue areas and through collegial bodies, was a feature of institutional inter-governmental cooperation throughout the twentieth century. However, it is only relatively recently that this effort has undergone a qualitative change, first by the increasing resort to formal mechanisms to verify governments' compliance with those obligations, and then, in particular since the end of the Cold War, by the multiplication of dispute settlement mechanisms to determine the legal consequences arising out of violations from international law. While the former typically resulted in non-binding findings, whose ultimate force depended on persuasion and peer-pressure, the end result of the latter are legally binding judgments or decisions which can (and increasingly are) enforced in domestic jurisdictions by the national authorities. This latter sub-aspect of the "legalization of world politics" could be aptly termed the "judicialization of world politics."

The aim of this book is to analyze the interplay between the multiplication of international organizations on the one hand, and of international dispute settlement bodies on the other. Of particular interest is the issue of the participation of international organizations in international dispute settlement proceedings. Here, there is an apparent lack of congruence between the growing role of such organizations as actors in world affairs and as subjects of (and to some extent makers of) international law, in contrast to their relative "exclusion" from the growing number of international dispute settlement bodies. This "exclusion," or lack of participation, may be formalized, for example where the rules and procedure of the dispute settlement body do not provide for participation or where they significantly limit such participation. Alternatively, it may be informal, for example where notwithstanding procedural rules allowing for access to the dispute settlement body concerned, international organizations have nonetheless remained inactive.

In examining the interface between international organizations and international dispute settlement, it is also interesting to note that in the majority of instances the organ representing the organization before a dispute settlement body and the dispute settlement body itself are both organs of the same organization. This raises the issue of independence and impartiality of dispute settlement bodies. By contrast, outside this legally self-contained world of international organizations there is still little if no interaction between international organizations and international dispute settlement bodies making up the international legal system. Indeed, there are almost no instances of organs of one international organization being given access to judicial bodies or other dispute settlement bodies

implementation to a third party. Goldstein, J./Kahler, M./Keohane, R.O./Slaughter, A.M., "Introduction: Legalization and World Politics," at 387.

of other organizations. With the exception of the special case of the European Communities, very rarely do international organizations interact with other organizations or states in international judicial fora. Arbitrations involving international organizations appear to be the only avenue for contentious procedures involving international organizations and so far they have been rarely resorted to in practice.

The only access for international organizations to the International Court of Justice (ICJ) is through the Court's advisory function, as the Court is only accessible to States in its contentious function. The possibility of such access to the principal judicial organ is worth exploring, not only for clarifying constitutional matters in relation to international organizations at a time when their number has dramatically increased, but also for furthering the common interests of an international community in quest of common legal rules for new global issues and challenges. While it has been suggested that the contentious jurisdiction of the Court should be extended to international organizations, such a development hardly appears imminent.[3] However, other possibilities would appear to exist at present to enhance the role of international organisations in international dispute settlement proceedings, such as intervention as *amici curiae*.

Overall, the issue of international organizations' participation in international dispute settlement proceedings raises a series of particular challenges. The sheer number and diversity of institutions, each with its own rationale, mandate, powers and idiosyncrasies, makes it a rich and challenging field of study. These challenges arise within a context of widespread calls for better governance. One key parameter is the promotion of the rule of law. Another is that of the transparency and accountability of international organizations. An answer to both is extending the participation of international organizations to dispute settlement procedures.

This book is comprised primarily of contributions to an international conference on International Organizations and International Dispute Settlement: Trends and Prospects, held on 9 February 2001 on the premises of the World Trade Organization and the Graduate Institute of International Studies in Geneva. The conference was organized by the Law Faculty of the University of Geneva, and the Project on International Courts and Tribunals (PICT), with the support of the Programme for the

[3] On the issue, see: Couvreur, Ph., "Développements récents concernant l'accès des organisations intergouvernementales à la procédure contentieuse devant la Cour internationale de justice," in Yakpo, E., Boumedra T., *Liber Amicorum Judge Mohammed Bedjaoui*, The Hague, Kluwer, 1999, at 293–323; Seidl-Hohenveldern, I., "Access of International Organizations to the International Court of Justice," in Muller, A.S., (ed.), *The International Court of Justice*, The Hague, 1997, pp. 189–203; Szasz, P., "Granting International Organizations Ius Standi in the International Court of Justice," in Muller, op.cit, pp. 169–188; Sztucki, J., "International Organizations as Parties to Contentious Proceedings before the International Court of Justice?," in Muller, op.cit., pp. 141–167.

Study of International Organizations (PSIO) of the Graduate Institute of International Studies, Geneva. The program of the conference is attached at the end of this book. The rationale of the conference was to explore issues and problems arising out of the phenomena described in this Introduction. The conference recognized that a variety of possible points of interaction exist between international organizations and international dispute settlement bodies. With this in mind, the conference took up four major themes: international organizations as parties to contentious cases before international courts and tribunals; the special case of international organizations and and the International Court of Justice, including requests for advisory opinions; international organizations as potential "friends of the court" or *amici curiae*; and the question of the independence of international judicial and quasi-judicial bodies from the organization of which they are organs.

The structure of the book to a large extent mirrors these themes. Part One presents an overview of the existing international judicial bodies and procedural rules relating to access of international organizations, and considers a series of legal and procedural issues that might arise when international organizations do participate in international judicial proceedings, particularly in contentious cases. Part Two delves into a peculiar international organization, the European Community/European Union, and describes the possibilities and limits of interaction of that organization with international judicial bodies. Part Three, focuses on the International Court of Justice as putative center of the galaxy of international judicial bodies. Because the ICJ is not open to international organizations to litigate contentious cases, the contributions in this section describe to what extent the narrow access given to international organizations by way of advisory opinions can, has been, should or might be dilated. In Part Four, the potential for international organizations to act as friends of the courts (i.e., *amici curiae*) is examined. Finally, in Part Five some aspects of the complex question of the independence of judicial and quasi-judicial bodies from the international organizations of which they form part are explored, in particular by reference to practice and procedures in the World Bank and the World Trade Organization and in the context of the relationship between the UN Security Council and the International Criminal Court.

Finally, a word on definitions. The term ***international organization,*** as used in this book will be understood as encompassing associations of sovereign States and/or other international organizations;[4] which are established by treaty; have an autonomous will distinct from that of its members, and thus are vested with legal personality; and are capable of adopting norms addressed to its members.[5] The organizations matching these criteria are a specific family of international organizations called *public international organizations,* or *intergovernmental organizations.*[6] Public international organizations are the subject of this study and will be referred to as international organizations (IOs) *tout-court.* Using a somewhat different set of criteria, the 2001–2002 Yearbook of International Organizations reports 241 intergovernmental organizations currently existing.[7]

The theme of this book is the role played, and potentially to be played, by international organizations in the work of international dispute settlement bodies. The term *international dispute settlement bodies* is used in a loose sense, indicating a complex galaxy of organs and institutions. The term encompasses international judicial bodies, such as the ICJ or the European Court of Human Rights, which settle disputes involving at least one State, but also international criminal courts and tribunals, whose function is not so much the settlement of disputes but rather the prosecution and sanctioning of the most serious crimes of international concern, and where no State *per se* is party to the proceedings. It includes mechanisms like the WTO Dispute Settlement System, which settles

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[4] While there are several examples of international organizations taking part in the work of other international organizations (in an advisory or observer capacity), there are not as many examples of international organizations being full members of other international organizations. Schermers, H.G., "International Organizations as Members of Other International Organizations," in Bernhardt, R. / Geck, W.K. / Jaenicke, G. / Steinberger, H., (eds.), *Völkerrecht als Rechtsordnung, Internationale Gerichtsbarkeit, Menschenrechte—Festschrift für Hermann Mosler,* Berlin, Springer, 1983, pp. 823–837. However, the main exception is the European Community, which is a full member, often alongside its own members, of several international organizations (i.e. FAO, WTO, and several commodity and natural resources management organizations, such as the International Cocoa Organization, or the North Atlantic Fisheries Organization). Schermers, H / Blokker, N. (eds.), *International Institutional Law: Unity within Diversity,* Nijhoff, The Hague, 2001, 3rd revised ed., at § 81–84.

[5] Sands, P. / Klein P. (eds.), *Bowett's Law of International Institutions,* London, Sweet & Maxwell, 2001, at 16. The Encyclopedia of Public International Law defines an IO as ". . . an association of States established by and based upon a treaty, which pursues common aims and which has its own special organs to fulfill particular functions within the organization." *Encyclopedia of Public International Law,* Amsterdam, North-Holland Pub. Co., 1981–1990, vol. XXX, at 1289. Schermers and Blokker define IOs as "forms of cooperation founded on an international agreement creating at least one organ with a will of its own, established under international law." Schermers / Blokker, op.cit., at 23.

[6] On the use of the term public international organization, intergovernmental organization and international institution, see Schermers/ Blokker, op.cit., at § 29–31, and notes 58–60.

[7] ". . . an organization is intergovernmental if it is established by signature of an agreement engendering obligations between governments, whether or not that agreement is eventually published." *Yearbook of International Organizations,* Brussels, Union of International Associations, Vol.1B, 2001–02, 38th ed., Appendix 2. The total of 241 organizations includes those listed in the yearbook as: federations of international organizations (1), universal membership organizations (35), intercontinental membership organizations (33), regionally oriented membership organizations (172). Yearbook, Appendix 3: Table 1.

disputes between States, but, unlike those bodies, has a hybrid structure including also elements of international arbitration and compliance-control mechanisms. It also includes bodies such as the World Bank Inspection Panel, which settles disputes, but where the dispute is between private entities and the Bank itself, and whose ruling is not by itself binding but it directed to and must be adopted by the Bank's own decision-making body. Besides, we are concerned in this book with both contentious and advisory proceedings before these bodies. Finally, we have not addressed separately the participation of international organizations in ad hoc arbitration or other ad hoc dispute settlement mechanisms. This latter aspect was not considered at the conference.

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PART I
GENERAL OVERVIEW

CHAPTER 6

ADVISORY OPINIONS AND THE FURTHERANCE OF THE COMMON INTEREST OF HUMANKIND

Laurence Boisson de Chazournes*

As early as the beginning of the 20th century, and later with the creation of the International Court of Justice (ICJ), a need was felt to allow international organizations to request advisory opinions, first of the Permanent Court of International Justice (PCIJ), and then of the ICJ. While the PCIJ Statute did not provide for advisory opinions until its inclusion in the 1929 revised Statute which came into force in 1936, there was nonetheless a practice of requesting opinions before that revision, premised on the Rules of Court.[1]

Despite the initial hesitation of States in the PCIJ era, Article 96 of the UN Charter providing for advisory opinions met with no objection in principle at San Francisco.[2] The practice of requesting advisory opinions has demonstrated that the procedure has been put to good use, with organs of the League of Nations and then UN organs and specialized agencies having, on a number of occasions, had recourse to this faculty.

In the context of the International Court of Justice, the advisory function was conceived as a means of promoting respect for the law both within the UN as well as within the broader UN system.[3] This has been

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1 The history is traced in S. M. SCHWEBEL "Was the Capacity to Request an Advisory Opinion Wider in the Permanent International Court of Justice than it is in the International Court of Justice?" LXII *BYIL* (1991), 77 at 78–81.

2 See "Draft Report of the Rapporteur of Committee IV/1" Doc. 875 IV/1/74 June 9, 1945 *Documents of the United Nations Conference on International Organization, San Francisco, 1945*, vol. XIII, 1945, 304.

3 For a list of the bodies and organisations authorized to request advisory opinions, see *Report of the International Court of Justice to the General Assembly*, 1 August 1999–31 July 2000, available on the ICJ's website: http://www.icj-cij.org/icjwww/igeneralinformation.htm

the case as illustrated by the varying requests which have been made not only by the General Assembly and on one occasion by the Security Council,[4] but also by the specialized agencies, notably the World Health Organization and UNESCO.[5]

The vast majority of the advisory opinions have essentially dealt with issues of a constitutional nature; namely ones relating to the existence and the powers of an institution, the sharing of responsibilities among the organs of the international organization or the extent of the privileges and immunities granted to agents of an international organization.[6] These are all important features of the advisory function, all the more so, given that the number of international organizations has dramatically increased and will continue in all likelihood to do so. The advisory opinions of the principal judicial organ of the United Nations constitute a body of norms which forms a point of reference for those institutions and their members. In sum, advisory opinions are important traditionally as they can be referred to for the identification of important aspects of the *corpus juris*

See also Ph. SANDS, P. KLEIN, *Bowett's Law of International Institutions*, 5th ed., Sweet & Maxwell, London, 2001 at 364.

[4] *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South-West Africa) Notwithstanding Security Council Resolution 276 (1970), Advisory Opinion of 21 June 1971, ICJ Reports 1971*, p. 16.

[5] For a detailed list see below note 6. On this point, see, in this book, Dominicé, and Romano pp. 19–25.

[6] As examples of this type of constitutional role, see in particular the early advisory opinions on request from the General Assembly, such as: *Reparations for Injuries Suffered in the Service of the United Nations, Advisory Opinion of 11 April 1949, ICJ Reports*, 1949, p. 174; *Competence of the General Assembly for the Admission of a State to the United Nations, Advisory Opinion of 3 March 1950, ICJ Reports*, 1950, p. 4.; *Effects of Awards of Compensation made by the United Nations Administrative Tribunal, Advisory Opinion of 13 July 1954, ICJ Reports 1954*, p. 47. Also on this constitutional role, one can note the requests from ECOSOC: *Applicability of Article VI, Section 22, of the Convention on the Privileges and Immunities of the United Nations, Advisory Opinion of 15 December 1989, ICJ Reports 1989*, p. 177; *Difference relating to immunity from legal process of a Special Rapporteur of the Commission on Human Rights (1998–1999) Advisory Opinion of 29 April 1999, ICJ Reports 1999*, p. 62; Still on this constitutional role, requests by specialised agencies include, amongst others, a request from UNESCO: *Judgements of the Administrative Tribunal of the ILO Upon Complaints Made Against UNESCO, Advisory Opinion of 23 October 1956, ICJ Reports 1956*, p. 77; and requests from the Word Health Organization: *Interpretation of the Agreement of 25 March 1951 Between the WHO and Egypt, Advisory Opinion of 20 December 1980, ICJ Reports 1980*, p. 73; *Legality of the Use by a State of Nuclear Weapons in Armed Conflict, Advisory Opinion, ICJ Reports, 1996*, p. 66.

On a broader and different use of the word "constitutional" in international law see J. CHARNEY "International Law-Making—Article 38 of the ICJ Statute Reconsidered" in J. DELBRÜCK, ed. *New Trends in International Lawmaking—International "Legislation" in the Public Interest* Duncker & Humbolt, Berlin, 1997, 171 at 183–184. See in particular a discussion of the term's use in D. CASS "The 'Constitutionalization' of International Trade Law: Judicial Norm-Generation as the Engine of Constitutional Development in International Trade" 12:1 *EJIL* (2001), 39.

applicable to international organizations. In light of the evolving complexity of international institutions, even within a single organization, and the multiplication of diverse instruments and types of actors which it entails, the utility of the advisory function should increase.[7]

Notwithstanding this "constitutional" role, advisory opinions can also play an important role in identifying the law on policy issues which are of interest to the international community (Part 1). A second issue to be dealt with relates to the changes which are taking place in the international decision-making process (Part 2). There too is an issue of complexification as actors of different standing increasingly look to the ICJ as a means of identifying the applicable principles and rules.

ISSUES OF GLOBAL PUBLIC POLICY AND THE REQUEST FOR AN ADVISORY OPINION

Resort to the Court as a Means of Promoting the Common Interest of Human Kind

There are indeed numerous areas where issues of global public policy[8] are at stake. As noted by Jonathan Charney, ". . . the international community . . . is increasingly interdependent. It faces an expanding need to develop norms to address global concerns, *e.g.*, global environment problems, weapons of mass destruction, international drug trafficking, international terrorism and human rights abuses."[9] The international community at large (which includes States, international organizations, non-governmental organizations and other non-State actors) is searching for agreed policy positions in these areas. In this context, it is all the more important to identify the legal principles which can or could ground such developments and thus promote the common interest of human kind.

Advisory opinions constitute one of the channels through which legal considerations may find their way into the international debate. In rendering these opinions, the Court contributes to the clarification of the applicable law and in so doing helps to prevent disputes from arising. This role is important at all levels, be it local, transnational or international.

[7] On the complexification of the UN system see P. SZASZ, "The Complexification of the United Nations System" 3 *Max Planck Yearbook of United Nations Law* (1999) 1.

[8] For an elaboration on the concept of international public policy, see V. GOWLAND-DEBBAS, "The Right to Life and Genocide: the Court and an International Public Policy," in L. BOISSON DE CHAZOURNES & Ph. SANDS, (eds.), *International Law, the International Court of Justice and Nuclear Weapons*, Cambridge University Press, Cambridge, 1999, 315–337, at 317. See also the dissenting opinion of Judge KOROMA, in *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion of 8 July 1996, ICJ Reports, 1996, 226, at 556ff.

[9] J. CHARNEY, "International Lawmaking—article 38 of the ICJ Statute Reconsidered," *op cit* at 176.

As a matter of fact there is an increasing permeability between fora of action and litigation: issues of an international character tend increasingly to be brought before national jurisdictions,[10] while domestic authorities and individuals see the pathway of the international scene as a means of promoting interests, be it before dispute settlement fora or in negotiating arenas. For example, the World Bank Inspection Panel provides an institutional bridge for partners of different standing by enabling individuals to bring claims that the Bank has not complied with its own operational policies and procedures, thereby broadening accountability of the organization.[11]

At a time of increased interdependence and complexity in the management of public affairs, the advisory function of the International Court should play an important role for furthering the common interest of human kind. In fact, the legalization of international discourse is to be seen as a means to this end.[12] It is perhaps the legal discourse being engaged in, and applied to, non-state actors which is the most striking. An example can be found in the increased submission by civil society of *amicus* briefs to courts and tribunals as a means of having their opinions heard when legal proceedings are instituted.[13]

The opinions given by the International Court of Justice following the requests of the World Health Organization and the General Assembly on the legality of resorting to nuclear weapons are examples of this type of function.[14] The answers to these particular requests are means for promoting an understanding of the legal regime applicable to policy issues, in this case pertaining to international security. The Court went beyond

[10] As an example, see the Pinochet "saga," S. VILLALPANDO, "L'affaire Pinochet: beaucoup de bruit pour rien? L'apport au droit international de la décision de la Chambre des Lords du 24 mars 1999," 104:2 *RGDIP* (2000), 393.

[11] See A. RIGO, "The World Bank and Institutional Innovations" in eds. E. BROWN WEISS, A. RIGO, L. BOISSON DE CHAZOURNES, *The World Bank, International Financial Institutions, and the Development of International Law*, ASIL Studies in Transnational Legal Policy No 31,Washington DC, 1999, 11 and L. BOISSON DE CHAZOURNES, "Public Participation in Decision-Making: The World Bank Inspection Panel" in eds. E. BROWN WEISS, A. RIGO, L. BOISSON DE CHAZOURNES, *idem*, 84 at 94.

[12] This legalization of international discourse can be found in a number of fields. Of the multiple examples which can be cited, one can note UK Foreign Minister Jack Straw's recent comments that "Setting common standards at a global level requires legislation. The UK is encouraging other governments to ratify ILO Convention 182 on the worst forms of child labour." Jack STRAW 'Local Questions, Global Answers'—Foreign Secretary's Speech on Globalisation. Speech given at the Museum of Science and Industry, Manchester, Monday 10 September 2001, available at http://www.fco.gov.uk/text_only//news/speechtext.asp?5281

[13] On amicus curiae, see, in this book, Chinkin/Mackenzie.

[14] *Legality of the Use by a State of Nuclear Weapons in Armed Conflict, Advisory Opinion, ICJ Reports, 1996*, p. 66; *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, ICJ Reports, 1996*, p. 226.

a typical, although important, casuist approach, in stating the *ratio legis*[15] to be taken into consideration when considering an issue of security pertaining both to the *jus ad bellum* and the *jus in bello* as well as covered by other corpuses of norms of international law. Significantly, in this advisory opinion, the Court reminded States to pursue in "good faith their obligation to bring to a conclusion negotiations leading to nuclear disarmament in all its aspects."[16] The Court's approach more generally highlighted the need for an integrated approach to the international legal order, in highlighting the linkages to be established between different areas of the law. This is all the more important at a time when policy issues arise with a global character and are trans-sectoral by nature.

As a matter of fact, in other areas also, the rule of law is being used as a vehicle for addressing issues of global concern. Thus in his attempt to bring within the system of global governance all actors on the international level, the UN Secretary General Kofi Annan has described his Global Compact, (a code of conduct addressed to the private sector), in the following terms: "The Global Compact . . . utilizes the power of transparency and dialogue to identify and disseminate good practices based on universal principles. The Compact encompasses nine such principles, drawn from the Universal Declaration of Human Rights, the ILO's Fundamental Principles on Rights at Work and the Rio Principles on Environment and Development. . . . And it asks companies to act on these principles in their own corporate domains. Thus, the Compact promotes good practices by corporations; it does not endorse companies."[17]

There are many global policy issues under discussion where a persistent question is what legal norms and rules are to be applied to such issues. There is, in other words, a quest for a legal answer to public policy concerns. The United Nations as well as its specialized agencies confront such issues on a daily basis in the course of their activities. For example, there is the question of the successive financial and economic crises since the mid-1990s and the visible need to bring more equity, not to say humanity, to the running of such affairs, concerns some would say, which are aptly reflected in the "public" demonstrations which are increasingly taking place in the concerned States as well as at international meetings and conferences. The rule of law should have a role to play in this context, with respect to equity effects, or issues of transparency in the management of these crises. An articulation of the legal regime applicable to the management of financial crises, might be clarified were the

[15] R. RANJEVA, "Droit positif, question juridique et procédure consultative," in *L'évolution du droit international. Mélanges offerts à Hubert Thierry*, Pedone, Paris, 363.

[16] *op cit*, p. 267, para 105F.

[17] Available at http://www.unglobalcompact.org/un/gc/unweb.nsf/content/whatitis.htm

Bretton Woods institutions to bring a request before the International Court of Justice on the interpretation to be given to some of the fundamental principles of international law.[18] This would be a way of appeasing the sometimes "uncivilly" expressed, but perhaps legitimate, concerns of the international community at large. It might also be seen as a way to increase the legitimacy of the intervention of the financial institutions.

The question of the humanitarian consequences stemming from the resort to economic sanctions is another policy issue of keen interest to the international community. The legal regime of sanctions is being increasingly questioned, notably regarding its effects on the populations of countries which suffer from these collective measures. Human rights and humanitarian law are invoked by numerous States, international organizations and individuals in order to set limits to resorting to such measures. A request brought by the General Assembly or the Security Council to the International Court of Justice would be a means of clarifying the legal parameters applicable to sanctions. It would also contribute to building a common understanding of the role and function of collective measures in a world which is increasingly inter dependant and where the concept of maintenance of international peace and security is more and more broadly interpreted.[19]

The struggle against the spreading of the HIV/AIDS pandemic is another such issue. Intellectual property rights and public health should also be resolved in a global public policy context. Bilateralism and litigation are not the best avenues for resolving conflicts in such a context. One can, for example, wonder why it was necessary to wait for the dispute over patent rights for generic drugs to combat HIV/AIDS to emerge between private companies and the government of South Africa before South African domestic jurisdictions or between the US and Brazil within the World Trade Organisation (WTO) in order to find ways to settle patent protection issues. The US finally withdrew its claim for the establishment of a WTO panel to examine infringements by Brazil of the TRIPS agreement.[20] The private companies withdrew their claims in South Africa. These claims highlighted the public policy nature of such issues, an issue which was taken up by the WTO in Doha and multilateralized through a decision of the Ministerial Conference.[21]

[18] For a more principled approach to IMF related issues see B. Brown, "IMF Governance, the Asian Financial Crisis and the New International Financial Architecture" in eds. Sienho Yee & Wang Tieya *International Law in the Post-Cold War World: Essays in Memory of Li Haopei*, 2000, 131 at 147.

[19] L. Boisson de Chazournes & L. Condorelli, "Common Article 1 of the Geneva Conventions Revisited: Protecting Collective Interests" 82 *IRRC* March 2000, 67; I. Osterdahl *Threat to the Peace. The Interpretation by the Security Council of Article 39 of the UN Charter*, Iustus Förlag, Uppsala, 1998.

[20] "US Drops TRIPs Dispute Against Brazil's Patent Law" 5:5 *Bridges* June 2001, 5.

[21] See "Declaration on the TRIPS agreement and public health" adopted on 14 November 2001 WT/MIN(01)/DEC/2, available at: http://www-chil.wto-ministerial.org/english/thewto_e/minist_e/min01_e/mindecl_trips_e.htm

It is interesting to note that economists refer to the eradication of communicable diseases such as HIV/AIDS or indeed other scourges such as terrorism or narcotics trafficking, in terms of the promotion of global public goods (GPGs). GPGs are "commodities, resources, services—and also systems of rules or policy regimes with substantial cross-border externalities that are important for development and poverty-reduction, and that can be produced in sufficient supply only through co-operation and collective action to achieve them."[22] The defining feature of GPGs is that they are impervious to frontiers and everyone benefits from their promotion. Other GPGs include the improvement of the environment. Lawyers transform this dialogue on GPGs into one on "common interests of the international community," although they often also attach a particular "normative weight" to these interests, in that they claim that the protection or promotion of such interests warrants greater legal protection than other interests. One can query whether, given that the potential consequences for the breach of such rules is particular, there is not a greater need for them to be identified and elaborated upon by the Courts—for if their invocation is increasingly being made in international discourse, their actual nature, content and contours remain notoriously ambiguous.[23] Thus the judge could provide a useful role (say in an advisory opinion) in further elaborating these public policy notions.

There is however, a fine line, as it is not ideal for the judge to elaborate where States lack the political will to do so.[24] In these cases, even in advisory opinions, the judge sometimes sows the seeds of confusion rather than clarification. Thus in the Nuclear Weapons advisory opinion on request from the General Assembly, the ICJ introduced the idea of "intransgressible" principles and it was left to the International Law Commission in its commentary to its recently adopted articles on State responsibility to draw the consequences of such a characterisation.[25]

[22] *Poverty Reduction and Global Public Goods. Issues for the World Bank in Supporting Global Collective Action* prepared by World Bank staff for the Development Committee (Joint Ministerial Committee of the World Bank and the Fund on the Transfer of Real Resources to Developing Countries) for consideration under item 1.A of the Provisional Agenda of the September 25, 2000 Development Committee meeting. DC/2000-16, September 6, 2000, page 2, paragraph 7.

[23] See Ch. Tomuschat "International Law: Ensuring the Survival of Mankind on the Eve of a New Century. General Course on Public International Law" 281 *RCADI* (1999), 1 at 86 and references therein.

[24] See L. Boisson de Chazournes & S. Heathcote "The Role of the New International Adjudicator," *Proceedings of the 95th Annual Meeting, ASIL, 2001*, 129.

[25] The Commentary to article 40 of the ILC articles on State responsibility says: "In the light of the International Court's description of the basic rules of international humanitarian law applicable in armed conflicts as "intransgressible" in character, it would also seem justified to treat these as peremptory" at para 5. See UN Doc. A/56/10 (2001) at 285.

Advisory Opinions and the Diversification of International Institutions and Dispute Settlement Mechanisms

To continue with the role of advisory opinions, it is interesting to note that in another context, that of the proliferation of dispute settlement mechanisms, advisory opinions can play a role. Specialization is an overwhelming trend; the preservation of the unity of the international system is all the more needed. There is a crucial need for consistency in the interpretation of core principles of international law in a world with numerous actors, institutions and dispute settlement procedures. It has been suggested that resorting to advisory opinions could be considered as a means of meeting this challenge.[26] As noted by Judge Schwebel when he was President of the ICJ:

> "In order to minimize such a possibility as may occur of significant conflicting interpretations of international law, there might be virtue in enabling other international tribunals to request advisory opinions of the International Court of Justice on issues of international law that arise in cases before those tribunals that are of importance to the unity of international law. . . . There is room for the argument that even international tribunals that are not United Nations organs, such as the International Tribunal for the Law of the Sea, or the International Criminal Court, when established, might if they so decide, request the General Assembly—perhaps through the medium of a special committee established for the purpose—to request advisory opinions of the Court."[27]

Another way might be for tribunals and dispute settlement bodies themselves to be able to submit requests to the International Court of Justice. These requests could be conveyed directly if they are able to do so or by the General Assembly, the Security Council or any one of the specialized agencies. As an example, it is interesting to note in this respect that in the course of the negotiation of a multilateral consultative process to be established under article 13 of the Framework Convention on Climate Change[28] a possibility for requesting an advisory opinion of the ICJ was

[26] See G. Abi-Saab, "Fragmentation or Unification: Some Concluding Remarks" to the Symposium "The Proliferation of International Tribunals: Piecing Together the Puzzle," 31:4 *NYU Journal of International Law and Politics*, (1999), 919 at 928.

[27] "Address to the Plenary Session of the General Assembly of the United Nations, 26 October 1999," available at http://www.icj-cij.org/

[28] Framework Convention on Climate Change XXXI:4 ILM 1992, 849. See also L. Boisson de Chazournes, R. Desgagne, C. Romano *Protection internationale de l'environnement. Recueil d'instruments juridiques*, Pedone, Paris, 1998, 616.

put forward.[29] As many questions would relate to the interpretation of the Convention, it was suggested that the Conference of the Parties and an *ad hoc* panel drawn from its members to be created could seek an advisory opinion from a panel of legal experts. The Conference of the Parties could also request an advisory opinion from the ICJ. In the end, this possibility was not retained. One could also consider amending the Statute of the Court so as to enable all tribunals and dispute settlement bodies established beyond the United Nations circle to make such requests directly.[30]

The possibility of extending access to advisory opinions to international institutions other than the ones already granted such a right is important. This would strengthen international organizations as fora for promoting respect for the rule of law as well as increase the possibility for all concerned actors to have a say in the decision-making process. This is all the more true in a context of multiplication of regional organizations whose functions might overlap or create uncertainty as to their complementarity with those of universal organizations. There too an amendment of the ICJ Statute would be needed. It is interesting to note that some of the regional organizations of an economic character provide for dispute settlement mechanisms.[31] The possibility for those organs to request advisory opinions on issues touching upon the interpretation and application of principles of international law would contribute to promoting a common understanding of the international legal system.

REQUEST FOR ADVISORY OPINIONS AND THE CHANGES IN THE INTERNATIONAL DECISION-MAKING PROCESS

Having dealt with global public policy issues which are in need of legal groundings and framework, another point to be made when looking at the role that advisory opinions can play in furthering the common interest of humankind relates to the changes which are taking place in the international decision-making process.

Public policy issues can be addressed in the context of contentious cases brought before the ICJ. Examples are many. One can refer to the issue of universal jurisdiction recently brought in the *Arrest Warrant* case,[32] the respect of human rights as obligations *erga omnes* referred to in the *Barcelona Traction* case, and the respect of the right of self-determination

[29] See "Revised Single Text on Elements Relating to Mechanism" A/AC.237/Msc.13, page 30–34.

[30] Abi-Saab *ibid* at 929.

[31] See Ph. Sands, R. MacKenzie, Y. Shany, *Manual on International Courts and Tribunals* Butterworths, London, 1999, 121–166. See, in this book, Romano pp. 26–33.

[32] Case Concerning the Arrest Warrant of 11 April 2000 (Democratic Republic of the Congo v. Belgium), available at http://www.icj-cij.org/

as an obligation *erga omnes* in the *East Timor* case.[33] Although public interest norms can be raised in the context of the contentious procedure, advisory opinions should also be considered avenues for the enforcement of common interests, especially with respect to the possibility for members of the international community to express their views.

Some Thoughts on the Openness of the Advisory Process

The question of the adequacy of dispute settlement procedures for the development of global public policy is an important one. First, contentious procedures allow intervention by members of the international community in only a very restrictive manner. Intervention as a third party is notoriously difficult.[34] In the context of advisory proceedings, article 66(2) of the ICJ Statute enables all member States of the organization which brought a request to make oral and written statements in the course of the procedure by means of a "special and direct communication."

Moreover, advisory opinions can be given on legal questions "actually pending between two or more States."[35] This does not affect the consent rule concerning contentious procedures since the Court's opinions are only advisory in nature.[36] This leads us to consider the possibility of whether requests could be made by UN organs or specialized agencies on issues of public policy falling within the purview of their areas of competence even though the issue is part of a dispute between two States. Such a request would allow other States and international institutions and organizations to express their views on the legal matter at stake. This would be a way of de-bilateralizing a dispute allowing for an exercise of collective custodianship over public interest matters.

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33 Note also public policy nature of Military and Paramilitary *Activities in and Against Nicaragua (Nicaragua v. United States of America), Merits, Judgement, ICJ Reports 1986*, p. 14 and the various *Cases Concerning the Use of Force* currently being brought by Yugoslavia against the various NATO States: see http://www.icj-cij.org/

34 See *Case Concerning the Continental Shelf (Tunisia/Libyan Arab Jamahiriya), Application for Permission to Intervene, Judgement, ICJ Reports 1981; Case Concerning the Continental Shelf (Libyan Arab Jamahiriya/Malta), Application for Permission to Intervene, Judgement, ICJ Reports, 1984, p. 3; Case Concerning Sovereignty over Pulau Ligitan and Pulau Sipadan (Indonesia/Malaysia), Application by the Philippines for Permission to Intervene, Judgement of 23 October 2001* available at http://www.icj-cij.org/

Contrast *Case Concerning the Land, Island and Maritime Frontier Dispute (El Salvador/Honduras), Application for Permission to Intervene, Judgement, ICJ Reports 1990, p. 3* where the Court allowed Nicaragua to intervene to a limited extent. On intervention see D. GREIG "Third Party Rights and Intervention before the International Court" 32 *Virginia Journal of International Law* (1992), 285.

35 Rules of Court 102(2) and 102(3). See H. MOSLER "Article 96" ed B. SIMMA ET AL, *The United Nations Charter, A Commentary* Oxford University Press, Oxford, 1008 at 1014.

36 Note that if the PCIJ in the *Eastern Carelia* Case refused to give an opinion, it was because it was directly relative to a dispute pending between two States, *Status of Eastern Carelia* 1923 PCIJ Series B, No.5. On this issue, see, in this book, Dominicé pp. 92–95.

International organizations and institutions (not only those who bring the requests before the ICJ) who are competent in the areas covered by a request may also submit written statements and make oral comments before the Court. Such was the case of the ILO, the Organisation of American States and indeed the UN Secretary General in the context of the request brought by the General Assembly on *Reservations to the Genocide Convention*.[37] This aspect is all the more important in an era of increased interdependence where issues become linked to each other and need to be looked at in a more holistic manner.

The contribution of the judge to the development of international law, especially if it emanates from advisory opinions, has certain advantages, notably that it may reduce the undue influence of the most politically powerful States.[38] This contributes towards a levelling of the playing field, as well as allowing all States to express their views. In the context of the requests on the legality of nuclear weapons brought by the WHO and the General Assembly, 42 States participated in the written phase of the pleadings, the largest number ever to join in proceedings before the Court. Among the participants to the written stage, four of the five States admitting to possess nuclear weapons participated, as did one "threshold" nuclear weapons state, NATO members, as well as many developing countries which had not previously contributed to proceedings before the ICJ.[39]

From an institutional standpoint, what should also be noted is that the requests most often emanate from the General Assembly or other plenary bodies of specialized agencies which comprehend almost all States of the international community and where legitimacy is not undermined in the international system. This situation favors the existence of "a general presumption that the request reflects a profound concern of the international community requiring a judicial answer"[40]

Non-State Actors in the Consultative Process

Access given to non-State actors in consultative processes is still a point to be resolved. International law is no longer a field in which States have an absolute monopoly of interest and action. Although States undoubtedly retain a pre-eminent role in the "making" of international law and in its implementation and enforcement, the activities of other

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37 See *Reservations to the Convention on Genocide, Advisory Opinion, ICJ Reports 1951*, p. 15 at p. 18. On this point, see also, in this book, Chinkin/Mackenzie pp. 143–144.

38 J. CHARNEY *op cit* at 182.

39 L. BOISSON DE CHAZOURNES & PH. SANDS, "Introduction" in L. BOISSON DE CHAZOURNES & PH. SANDS (EDS.) *op cit*, pp. 5–6, Th. FRANCK "Fairness and the General Assembly Advisory Opinion" in L. BOISSON DE CHAZOURNES & PH. SANDS (EDS.) *idem*, 511–519.

40 Ch TOMUSCHAT *op cit*, 425.

actors—be they international organizations or non-State actors, such as private companies, NGOs or individuals—are increasingly relevant, either directly or indirectly.[41]

International organizations, such as the UN or the ILO, not to mention the WTO, are called upon to be arenas for discussion involving States as well as non-State actors. This complexification of the world stage brings transformations in the decision-making process. The negotiations of the Rome Statute establishing the International Criminal Court and the negotiations of the Ottawa Convention on the elimination of landmines have revealed the increased role of non-State actors in the creation of international law. This has led some to consider that there is an increased politicization of the process with issues of legitimacy at stake.[42]

The requests for advisory opinions on the legality of the resort to nuclear weapons have raised concerns in respect of the legitimacy of the process for requesting advisory opinions because of the intervention of non-State actors. Judge Guillaume commented upon this in his Separate Opinion in the *Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons* requested by the General Assembly, when he said:

> "I am sure that the pressure brought to bear (by the NGOs, who in the last analysis initiated the request (did not influence the Court's deliberations, but I wondered whether, in such circumstances, the requests for opinions could still be regarded as coming from the Assemblies which have adopted them or whether, piercing the veil, the Court should not have dismissed them as inadmissible. However, I dare to hope that Governments and inter-governmental institutions still retain sufficient independence of decision to resist the powerful pressure groups which besiege them today with the support of the mass media. *I also note that none of the States which appeared before the Court raised such an objection* (emphasis added). In the circumstances I did not believe that the Court should uphold it *proprio motu*."[43]

There is always a risk of politicization of the dispute-settlement process. During the Cold War, requests for advisory opinions were sometimes used to provide an arena in which to play out Cold War inter-State disputes.[44] Today in a so-called globalized world, there is a need to address

[41] See L. Boisson de Chazournes and Ph. Sands, "Introduction" in (eds.) L. Boisson de Chazournes and Ph. Sands *op cit*, p. 8.

[42] See S. SUR, "Ver un Cours pénale internationale: la Convention de Rome entre les O.N.G. et le Conseil de Sécurité," 103:1 *RGDIP* (1999), 29.

[43] *Op cit* at 288.

[44] See for instance the "Admissions Case" *Competence of Assembly for the Admission to the United Nations, Advisory Opinion, ICJ Reports, 1950, p. 4.*

common problems requiring compromises by all in the name of the interests of all. In this context, new actors are making themselves more vocal and this may be considered as a politicising factor. Whilst this may be the case, States are still in the last analysis the entities which vote in the various UN organs in favour of a request for an advisory opinion.[45] They are in no way deprived of their sovereign prerogatives to vote in favor or against a request for an advisory opinion as member States of an international organization. Political pressures may be different than they were in the 1950s. Today they are perhaps more oriented towards the furtherance of humankind. There is nonetheless nothing new in the fact that these requests may present political aspects.

From a historical viewpoint, it should be noted that the majority of the requests transmitted by the Council of the League of Nations to the Permanent Court were not in substantial terms requests of the Council. They were actually submitted at the instance of States or of an international organization other than the League of Nations.[46] In the fourteenth Annual Report of the Permanent Court, 16 such requests are identified. Six are identified as deriving from the ILO,[47] and interestingly enough, the Court's report lists among the international organizations interested in the case not only the ILO but various non-governmental organizations, such as the International Confederation of Christian Trades Unions[48] and the International Institute of Agriculture.[49]

Other international organizations involved were the Mixed Commission for the Exchange of Greek and Turkish Populations and the Greco-Bulgarian Mixed Emigration Commission. What is interesting is that both of these institutions were neither permanent nor universal. In addition,

[45] The ILO being an exception. See A.M La Rosa & I. Duplessis, "L'expérience singulière du tripartisme au sein de l'Organisation International du Travail" in dir. R. Mehdi *La démocratisation du système des Nations Unies*, 9e rencontres internationales d'Aix-en-Provence, 2000, Pedone, Paris, 2001, 123.

[46] S.M. Schwebel, *op cit*, p. 81.

[47] *International Labour Organization and the Conditions of Agricultural Labour; Nomination of the Workers' Delegate to the International Labour Conference; International Labour Organization and Methods of Agricultural Production; International Labour Organization and Personal Work of the Employer; Danzig and the International Labour Organization and Employment of Women in the Night.* See Fourteenth Annual Report of the Permanent Court of International Justice (June 15 1937–June 15 1938), PCIJ Series E, N° 14 at 72–75.

[48] *Nomination of the Workers' Delegate to the International Labour Conference; International Labour Organization and Personal Work of the Employer and Employment of Women in the Night.* See Fourteenth Annual Report of the Permanent Court of International Justice (June 15 1937–June 15 1938), PCIJ Series E, N° 14 at 72–75.

[49] *International Labour Organization and the Conditions of Agricultural Labour; International Labour Organization and Methods of Agricultural Production.* See Fourteenth Annual Report of the Permanent Court of International Justice (June 15 1937–June 15 1938), PCIJ Series E, N° 14 at 72–75.

the Council of the League of Nations acted as a conduit for putting requests for advisory opinions made by organizations which had not been formally authorized to do so.[50] As can be seen the capacity to request an advisory opinion was generously applied.

CONCLUSION

As concluding remarks, it is interesting to raise the question of whether the protection of common interests may in fact be coming closer to the proper role of the advisory function. After all, the UN is the closest thing to a trustee of the common interest of humankind. Thus States gathered at the Millennium Summit reaffirmed their faith in the common values which the United Nations Charter is in their view said to contain, such as freedom, equality, solidarity and respect for the environment.[51]

The advisory function of the Court is all the more needed in a world which is more complex and more diverse than when the first building blocks of an international system were put together early in the twentieth century. In this context, it is interesting to recall the practice regarding the request of advisory opinions which preceded the establishment of the International Court of Justice as the principal judicial organ of the United Nations. The Council of the League of Nations understood its role in requesting advisory opinions as a means for promoting respect for the rule of law for the benefit of a wide array of interested actors. It appears important to revive this role at a time when the international system is going through dramatic changes and there is a need for all actors to play by the "legal rules of the game."

50 S.M. SCHWEBEL, *op cit*, p. 81.

51 See A755/L2(8 Sept 2000).

CHAPTER 7

LINKS BETWEEN THE ILO AND THE ICJ: A LESS THAN PERFECT MATCH

Anne-Marie La Rosa*

INTRODUCTION

It is common knowledge that the International Labour Organization (ILO) and the Permanent Court of International Justice (PCIJ) were created in the aftermath of the First World War. Both were intended to be pillars of the new international order. The ILO was created with the purpose of ensuring lasting peace and social justice by improving working conditions worldwide. Its main means of action was through standard setting activities and it was therefore expected to build up a comprehensive code of international labour law and practice.[1] The PCIJ was intended to become the system's permanent international judicial body, with universal jurisdiction to settle international disputes through law. However, the ILO was created two years before the PCIJ (in 1919 and 1921 respectively), and not by like-minded diplomats. Even though Albert Thomas, then ILO Director-General, attempted to draw the attention of the PCIJ's drafters on several occasions to the necessity to take into account the ILO Constitution,[2] the result was that the two institutions, far from

* International Training Centre of the ILO. This article expresses the author's personal views, for which she alone, and not the organizations with which she was or is associated, are responsible. The author would like to thank Chloé Charbonneau, Marisa Musto and Maria Poupakis, jurists, for their valuable help in the preparation of this article.

1 This standard setting function is still the main means of action of the ILO. Since 1919, the International Labour Conference has adopted 184 conventions and 192 recommendations. The total number of ratifications on March 2002 was 7117. 175 States are members of the organization. For further information, please consult the ILO website: http://www.ilo.org.

2 Letter dated 20 February 1920 of the ILO Director-General to the League of Nations' Secretary General, the content of which was included in a "Note communicated to the Third Commission of the Assembly of the League of Nations on the Draft Scheme for the Establishment of the Permanent Court of Justice," reproduced *in* (1920) *ILO Official Bulletin (O.B.)*, no 14, pp. 1–10.

Annex 545

T. Mayr & J. Mayr-Singer, "Keep the Wheels Spinning: The Contributions of Advisory Opinions of the International Court of Justice to the Development of International Law," *Heidelberg Journal of International Law*, 2016, pp. 425-449

Keep the Wheels Spinning: The Contributions of Advisory Opinions of the International Court of Justice to the Development of International Law

Teresa F. Mayr[*]*/Jelka Mayr-Singer*[**]

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Abstract

The International Court of Justice's role in the development of international law has been a matter of disagreement since the establishment of the Court. While it is by now widely accepted that legal development falls within the ambit of the Court's functions, the degree and manner of such an involvement remains disputed. The current article will outline the Court's many contributions in its advisory function to the development of international law, highlighting the semantic and normative authority of the Court's pronouncements. While being an active agent in the law-making process,

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internal and external safeguards keep the Court within its proper role as a judicial body, thereby avoiding any risk of judicial activism.

I. Introduction

Many discussions at the inter-State level as well as in academic circles have been devoted to the contours of the judicial role of the International Court of Justice (ICJ). The current article will combine two areas of debate, namely the advisory function of the Court and its role in the development of international law. The criticism in relation to both turns on questions of judicial propriety and the Court's place in the international legal system as a whole. Since its adoption, the advisory function of the ICJ (and previously the Permanent Court of International Justice, PCIJ) has been widely scrutinized as an alienation of the traditional judicial role of courts of law. It has been criticized as a way to circumvent the Court's binding contentious jurisdiction with its stringent consent requirement and has suffered from a lack of recourse by the United Nations' (UN) organs and agencies authorized to request such opinions.[1] Due to their *erga omnes* character and the high authority of the ICJ, advisory opinions, however, can strongly influence the understanding of rules of international law. At the same time, a basic premise of the international legal system postulates that it is only States that can make and shape international law.

Besides those taking a principled stance against all judicial law-making, it is now widely accepted that the ICJ's advisory opinions may and do develop the law.[2] As *Lauterpacht*, one of the most prominent proponents of judicial law-making, already acknowledged in 1958,

> "[j]udicial legislation, so long as it does not assume the form of a deliberate disregard of the existing law, is a phenomenon both healthy and unavoidable".[3]

"Healthy" as it may be, due to the nature of the international legal system, pinpointing *Lauterpacht*'s "deliberate disregard of the existing law" is

[1] While the ICJ has only given 27 advisory opinions since its establishment, it has delivered 121 judgments in contentious cases (available at <www.icj-cij.org>; accessed 4.4.2016).

[2] E.g. *H. Lauterpacht*, The Development of International Law by the International Court, 1958; *L. Boisson de Chazournes*, Advisory Opinions and the Furtherance of the Common Interest of Mankind, in: L. Boisson de Chazournes/C. P. R. Romano/R. Mackenzie (eds.), International Organization and International Dispute Settlement: Trends and Prospects, 2002, 105; *Y. Shany*, No Longer a Weak Department of Power? Reflections on the Enforcement of a New International Judiciary, EJIL 20 (2009), 73.

[3] *H. Lauterpacht* (note 2), 156.

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no easy task. Particularly in relation to customary international law as well as in cases of dynamic treaty interpretation, it is often not possible to decisively blame the Court for (impermissible) disregard of existing law or praise it for (permissible) development of established rules.

The current article, after outlining the basis and nature of the advisory function, will analyze when and how the Court – wearing its advisory hat – has indeed developed the law and will argue that whether these instances are referred to as law-making or developing or clarifying is in fact a matter of degree or preference, rather than kind. Concerns of judicial activism following the acknowledgement of a law-creative role of the Court will be rejected as the international legal system possesses inherent safeguards to prevent such instances and the Court itself has shown strong adherence to its primary judicial function. Some of the topics discussed and arguments raised will be equally applicable to the Court's contentious jurisdiction, but case examples will be solely drawn from the Court's advisory function. In fact, some of the most influential cases in terms of law development stem from the ICJ's work as an advisory body rather than from its role as a venue for binding dispute settlement.

II. The Advisory Jurisdiction of the Court

The ICJ's advisory opinions have been defined as "judicial statements on legal questions submitted to the Court by organs of the United Nations and other legal bodies so authorized".[4] They are part of the Court's jurisdictional activities and, in exercising its advisory function, the ICJ is guided by the same provisions that apply in contentious cases. The fact that only organs of the UN and of the specialized agencies are entitled to request opinions, emphasizes the ICJ's role as the principal judicial UN organ and enables it to participate in the activities of the Organization. In a way, advisory opinions might be conceived as a method to compensate for the procedural incapacity of the UN and the specialized agencies before the Court.[5] The purpose of the advisory function is, however, "not to settle – at least directly – disputes between States, but to offer legal advice to the organs and institutions requesting the opinion".[6] This is in line with the current trend to ask for an

[4] *K. Oellers-Frahm*, Article 96, in: B. Simma/D.-E. Khan/G. Nolte/A. Paulus (eds.), The Charter of the United Nations: A Commentary, Vol. II, 3rd ed. 2012, 1976.

[5] *S. Rosenne*, The International Court of Justice. An Essay in Political and Legal Theory, 1957, 452.

[6] E.g. *Legality of the Threat or Use of Nuclear Weapons*, ICJ Reports 1996, 226, at 236.

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advisory opinion in order to obtain guidance for the body making the request as regards its future activities and the corresponding restraint in applying an advisory procedure to settle international disputes.[7]

1. Statutory Framework

The main provisions governing the Court's advisory function appear in Art. 96 of the UN Charter and in Art. 65 of the ICJ Statute.[8] Art. 96 of the Charter authorizes two categories of bodies to request advisory opinions. The General Assembly and the Security Council may automatically seek advisory opinions on legal questions of any kind, whereas other organs and the specialized agencies are allowed to do so only by virtue of an authorization by the General Assembly and are restricted to legal questions that are within the scope of their activities.[9] While the Security Council has only once resorted to its prerogative, requests stemming from the General Assembly's privileged position form the overall majority of opinions. Bearing in mind the small number of only 27 advisory opinions in 69 years, suggestions have been made to grant access to the Court's advisory jurisdiction *ratione personae* to a wider group of intergovernmental organizations, to empower the Secretary-General to request opinions on his own initiative and to authorize international and even national supreme courts to ask for an advisory opinion on difficult or disputed questions of international law.[10] There is, however, an ongoing discussion on whether expanding the circle of bodies with such an entitlement would indeed reinvigorate the ICJ's advisory competence.

Although the ICJ's jurisdiction extends only to "legal questions", the Court has frequently held that to a certain degree every international question possesses both legal as well as political aspects and that the mere fact that a question also has political implications "does not suffice to deprive it of its character as a 'legal question'".[11] Furthermore, it is established that the

[7] *S. Rosenne*, The Law and Practice of the International Court, 1920-2005, Vol. I, 4th ed. 2006, 293.

[8] Four instruments contain provisions on the ICJ's advisory function: UN Charter (Art. 96), ICJ Statute (Art. 65-68), Rules of Court (Art. 102-109) and Practice Directions (Art. XII).

[9] A list of organs and agencies of the UN authorized to request advisory opinions is available online at <http://www.icj-cij.org> (accessed 14.7.2015).

[10] Statement by the then President of the ICJ, Judge *Shi*, to the Sixth Committee of the General Assembly, 5.11.2004, A/C.6/59/SR.21, para. 76 et seq.

[11] *Nuclear Weapons* Opinion (note 6), at 234; more recently *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, ICJ Reports 2004, 136, at 155;

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legal question may be abstract or relating to a dispute that is actually pending between two or more States.[12]

If a legal question put to the ICJ has links to a currently pending dispute between States, the request for an advisory opinion could be seen as an effort to circumvent the principle that in contentious proceedings the parties' consent is required. The Court, in both its contentious cases and advisory proceedings, has consistently adhered to its obligation to respect the essential rules guiding its activities as a court of justice, including the principle that a State does not have to allow its disputes to be submitted to judicial settlement without consent. It did, however, point out, that there is a difference when it comes to advisory proceedings, since the Court's opinions are only of an advisory nature and do not have binding force. They are not addressed to the States but to the requesting body and, in principle, should not be refused. Still, the Court considers lack of consent as an element in relation to questions of judicial propriety.[13] In such a case, the ICJ might make use of its discretionary power under Art. 65 of the Statute to decline a request by invoking "compelling reasons" which justify the refusal to deliver an advisory opinion.

2. Nature and Authority of Advisory Opinions

Neither the Charter nor the Statute provides advisory opinions with legally binding force. Additional to the lack of a consent requirement of States in advisory proceedings, States cannot prevent the rendering of an advisory opinion which an organ or specialized agency of the UN deems necessary.[14] At the same time, an advisory opinion does not have a *res judicata* effect and creates no obligations for the primary addressee or for an individual State or the community of States as a whole to accept the Court's answer.

Still, lack of binding force does not "deprive an advisory opinion of all the moral consequences which are inherent in the dignity of the organ de-

Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, ICJ Reports 2010, 403, at 415.

12 Art. 102(3) Rules of Court. "… the Court may give an advisory opinion on any legal question, abstract or otherwise." – *Conditions of Admission of a State to Membership in the United Nations (Article 4 of the Charter),* ICJ Reports 1948, 57, at 61.

13 E.g. *Wall* Opinion (note 11),157 et seq.

14 *Wall* Opinion (note 11),157 et seq.

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livering the opinion, or even of its legal consequences".[15] On the contrary, because the Court is held in such high esteem its opinions doubtlessly do "have a justifying effect for any action taken in conformity with the finding in the advisory opinion".[16] No State can therefore be considered to act in contradiction to international law if complying with the findings of the Court in an advisory opinion.[17] *Fitzmaurice* very pointedly spoke of the "persuasive character and substantive authority"[18] of advisory opinions and indeed it would be almost blasphemous to call the authoritative character of the ICJ's advisory opinions into question. It has been argued that, due to the fact that the persuasive nature of advice is often superior to force and coercion, advisory opinions may even be more important in international relations than judgments.[19]

Advisory opinions have rightly been defined as statements of the law for all, the law *erga omnes*. This characterization, however, fails to address the question on the extent to which an advisory opinion actually enters into the general corpus of international law.[20] The main body of the current article is devoted to this issue. While the requesting bodies have consistently acted in compliance with the legal advice given to them by the ICJ, the reception of the community of States is a decisive element in determining the Court's involvement in the development of international law through its advisory opinions.

III. Advisory Opinions and Their Impact on the International Legal System

With the statutory background of the advisory opinion and the authority of such opinions in practice in mind, the current section will analyze the impact of the ICJ's opinions in the international legal system as well as the

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15 *Interpretation of Peace Treaties with Bulgaria, Hungary and Romania*, ICJ Reports 1950, 65, Separate Opinion of Judge *Azevedo*.

16 *K. Oellers-Frahm* (note 4), 1987.

17 *J. A. Frowein/K. Oellers-Frahm*, Article 65, in: A. Zimmermann/C. Tomuschat/K. Oellers-Frahm/C. J. Tams (eds.), The Statute of the International Court of Justice: A Commentary, 2nd ed. 2012, 1605, at 1624.

18 *K. Oellers-Frahm*, Lawmaking Through Advisory Opinions?, GLJ 12 (2011), 1033, at 1050 quoting *Fitzmaurice*.

19 *M. Lachs*, Some Reflections on the Contribution of the International Court of Justice to the Development of International Law, Syr. J. Int'l L. & Com. 10 (1983), 239, at 249 quoting *Hudson*.

20 *S. Rosenne* (note 7), Vol. III, 4th ed. 2006, 1699.

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community of States. While it has been accepted that the Court has some role to play in the development of international law, there has been an ongoing debate about the degree and scope of such involvement. Is the Court allowed to make law, to develop the law or neither of the two? Is the differentiation between law-making and law-developing a distinction without difference, and if the Court were allowed to make law, does this mean it is a legislator in the formal sense? How would such a role be reconcilable with the relevant provisions in the UN Charter as well as the traditional conception of a judicial body?

In discussing these questions, the view put forward by the present authors is that, though there is no formal legislative role for the ICJ, the Court in its advisory function has been actively involved in the development of the law where it was expedient in the interest of the international community to do so. In order to guard its authority as an independent and objective court of law in the process, it has shown caution and judicial restraint. The ICJ thereby remained within the realms of functions conferred on it by the international community, and hence, whether such involvement is called law-making or clarification or development is, in practice, a matter of little importance.

1. Development of Existing Law vs. Making of New Law

As the traditional role of any court, in the words of *Francis Bacon* in the opening of his *Essay of Judicature*, is to "jus dicere, and not jus dare; to interpret the law, and not make or give law", many commentators show displeasure when it comes to attributing a law-making function to the ICJ. While they often acknowledge that the Court may develop the law, they highlight the distinction between the development and the creation of a legal rule. *Ruda* adheres to such an approach when he states that

> "[t]he word "development" stands for the Court's contribution to the interpretation and application of existing rules of international law and not to the establishment of new rules. The work of any court, be it national or international, consists of the interpretation and application of existing law and not the creation of new language."[21]

Although such a distinction seems natural at first, it does not translate well into the reality of the international sphere. As *Venzke* has argued,

[21] *J. M. Ruda*, Some of the Contributions of the International Court of Justice to the Development of International Law, N.Y.U. J. Int'l L. & Pol. 24 (1991), 35, at 35.

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> "[u]pon closer inspection … the concept of development starts to blur. It seems to suggest the creation of something new, or … an addition to that which already exists. But in this sense the concept of development would challenge the idea that international courts *apply* and do not *make* law".[22]

Besides the overlap in effect between law-making and law-developing, in many instances, it will also be difficult to clearly label the Court's engagement as an interpretation or clarification of existing legal rules and a resulting development of the law, rather than a principal creation of a new legal norm. Particularly in relation to customary international law, a source of law that is in constant flux, attributing a fixed role to the Court as clarifier or interpreter will be problematic. Furthermore, there are many instances where judicial legislation does not in fact change the law, but merely fulfils its (theoretical) purpose in practice, adding to the blurring of the line between the making of new rules and the application and development of existing rules of international law.[23]

Kelsen, as early as 1928, opposed a strict distinction between law-making (*Rechtssetzung*) and the application of law (*Rechtsanwendung*) and argued that every application of the law amounted to the creation of new legal rules.[24] *Pellet* boiled down the distinction between law-making and legal development to a question of perspective, boldly stating that,

> "you will name 'legislation' a legal reasoning you disapprove of but you will call that same reasoning 'progressive development" when you favour it".[25]

Though such an assessment may shed an overly pessimistic light on the motives of some States and academics, it still pointedly highlights the arbitrariness between the two terms.

The *prima facie* requirement remains that the ICJ cannot engage in politics per se nor act as a primary legislator. The Court must decide disputes before it on the basis of the existing law, but the law is full of nuances, sometimes giving the Court a choice between mechanical application of an existing rule and development of that norm.[26]

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[22] *I. Venzke*, The Role of International Courts as Interpreters and Developers of the Law: Working Out the Jurisgenerative Practice of Interpretation, Loy. L. A. Int'l & Comp. L. Rev. 34 (2011), 99, at 100 et seq.

[23] *H. Lauterpacht* (note 2), 161.

[24] *H. Kelsen*, Wesen und Entwicklung der Staatsgerichtsbarkeit, VVDStRL 5 (1929), 30.

[25] *A. Pellet*, Shaping the Future of International Law: The Role of the World Court in Law-Making, in: M. H. Arsanjani/J. K. Cogan/R. D. Sloane/S. Wiessner (eds.), Looking to the Future. Essays on International Law in Honour of W. Michael Reisman, 2010, 1065, at 1075.

[26] *R. Kolb*, The International Court of Justice, 2013, 1182.

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> "There are obvious limits to [the] … law-making activity of judges, but these limitations do not materially alter the fact that courts do not slavishly administer abstract rules without being able to exercise creative discretion."[27]

Sir *Robert Jennings* therefore described the law-creative role of the Court as an ancillary function, but one that is within the limits of the ICJ's judicial competence. He stated that

> "[t]he primary task of a court of justice is not to "develop" the law, but to dispose, in accordance with the law, of that particular dispute between the particular parties before it. This is not to say that development is not frequently a secondary part of the judge's task … And it *is* to say that any "development" should be integral and incidental to the disposal according to the law of the actual issue before the court."[28]

The judicial activities of the Court can hence be positioned on a sliding scale with pure application of the law on one end and creation of a new legal norm on the other. Where the boundaries between application, clarification, interpretation, development and law-making lie as well as where the line between permissible and impermissible actions by the Court is, will in many cases be questions of preference or subjective opinion, rather than be objectively determinable.

Statements by academics and judges since the establishment of the PCIJ and its successor, the ICJ, make the subjectivism in this debate visible. While *Lauterpacht* would have applauded any law-making role of the ICJ as long as it did not amount to a deliberate disregard of the existing law,[29] Judge *Yusuf* only conceded a law-developing function when the law was in a grey zone[30] and Baron *Descamps* would not have allowed any law-creative but only law-elucidating function of the Court's judges.[31] Then again, *Akande* contends that the ascertainment, interpretation and application of a legal rule to a particular set of facts already amounts to a law-making act as it requires a certain amount of judicial creativity.[32] Due to the absence of a clear demarcation, a *prima facie* rejection of a law-making role of the Court

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[27] *H. Lauterpacht*, The Absence of an International Legislature and the Compulsory Jurisdiction of International Tribunals, BYIL 11 (1930), 134, at 144.

[28] *R. Y. Jennings*, The Role of the International Court of Justice, BYIL 68 (1998), 1, at 41.

[29] *H. Lauterpacht* (note 2), 156.

[30] *Jurisdictional Immunities of the State (Germany v. Italy; Greece intervening)*, ICJ Reports 2012, 99, at 209 et seq. paras. 47-49, Dissenting Opinion of Judge *Yusuf*.

[31] *PCIJ, Advisory Committee of Jurists*, Procès-verbaux of the proceedings of the Committee of Jurists, 16.6.-24.7.1920, 336.

[32] *D. Akande*, The Competence of International Organizations and the Advisory Jurisdiction of the International Court of Justice, EJIL 9 (1998), 437, at 464.

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coupled with the acceptance of a law-developing function is artificial and shows a blind adherence to semantics over reality. Nevertheless, referring to the ICJ as a legislator is a more delicate matter.

2. The ICJ as a Legislator?

Having rejected an outright denial of any involvement of the ICJ in law-making processes, it is still important to recall that the ICJ remains "the principal *judicial* organ" of the UN, rather than a world legislator. The Court itself has over and over again emphasized its strong adherence to a purely judicial role. In the oft-cited statement of the Court in the *Nuclear Weapons* opinion, the Court refused to accept the suggestions of some States that it had taken on a legislative role, stating that

> "[i]t is clear that the Court cannot legislate … Rather its task is to engage in its normal judicial function of ascertaining the existence or otherwise of legal principles and rules … [I]t states the existing law and does not legislate. This is so even if, in stating and applying the law, the Court necessarily has to specify its scope and sometimes note its general trend."[33]

Similarly, in the *Icelandic Fisheries Jurisdiction* judgment, the Court declared that

> "[i]n the circumstances, the Court, as a court of law, cannot render judgment *sub specie legis ferendae*, or anticipate the law before the legislator has laid it down".[34]

The ICJ's reiteration and strong (formal) devotion to a purely judicial role stems from the nature of the international judicial system and is based on fundamental principles of international law. A basic premise of the international legal system is that only those rules that are the product of the States' express will can bind them. As the international judicial system depends on the voluntary submission of States, an international court that makes renewed attempts to modify existing law and to create new rules, will cause suspicion among governments and thereby risk a "drastic curtailment of its activity".[35] Hence, the ICJ must present its judgments as being firmly based on existing law in order to maintain an important element of its legit-

[33] *Nuclear Weapons* Opinion (note 6), 237 para. 18.
[34] Fisheries Jurisdiction (*Federal Republic of Germany v. Iceland*), ICJ Reports 1974, 175, at 192 para. 45.
[35] *H. Lauterpacht* (note 2), 76.

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imacy. The Court's approach allows it to claim objectivity and to maintain the trust of States parties. *Hernández* has summarized this point:

> "Simply put, the Court has a vested interest in sustaining the view that it merely applies existing law; this view allows it to uphold the parties' consent, denies any agency as a law-creating actor, and allows it to uphold the legitimacy of its reasoning as a mere reflection of the law."[36]

He further argues that limiting the role of judges in the development of the law to the mere exposition of legal rules waiting to be discovered is a tactical move by judges to protect themselves from any accusations as to an engagement in law-creation rather than mere application and interpretation of the law.[37] Hence, although the line between *jus dicere* and *jus dare* is not necessarily fixed, but rather may vary from context to context, keeping a distinction between the two remains important for the authority of the Court.[38] Still, as mentioned above, whatever the Court's formal adherence to the fiction of a purely law-applying role may be, the Court is an indispensable actor in the development of the law. While the formal function remains *jus dicere*, *jus dare* is often an inevitable side product. As *Capelletti* has stated,

> "speaking of the judge as a law-maker is, in a sense, no more than an obvious banality, a meaningless truism. Of course any interpretation is creative; and, of course, judicial interpretation is law-making."[39]

Nevertheless, the terms "law-maker" and "legislator" cannot be used interchangeably. The form, mode and process of making the law are fundamentally different. Not only the Court's public utterances as well as the nature of the international system stand in the way of the Court becoming a primary legislator, but also obstacles of a – crudely termed – "procedural" nature hinder any such development. Firstly, the judicial process has an essentially reactive character that prevents courts from acting as primary law-making agents.[40] In relation to advisory opinions, the requesting organ not only decides when to make a request, but also determines the scope and content of any question posed. Though the Court in the past has sometimes bent the four corners of the request, the question posed still regulates the

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[36] *G. I. Hernández*, The International Court of Justice and the Judicial Function, 2014, 87.

[37] *G. I. Hernández* (note 36), 90.

[38] *R. Y. Jennings* (note 28), 41.

[39] *M. Cappelletti*, The Law-Making Power of the Judge and Its Limits: A Comparative Analysis, Mon. L. R. 8 (1981), 15, at 19.

[40] *R. Higgins*, Problems and Process, 1994, 202.

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Court's potential as a law-making agent. Secondly, the ICJ, in contrast to primary legislators, is bound to base its opinions on one of the sources in Art. 38 of its Statute. Legislators do not generally have to follow any such constraint, but can legislate freely without reference to other legislative enactments.

Thirdly, judicial "legislation" takes a different form than codification by a legislative body. Instead of giving detailed provisions as to definition and application of the new legal norm, judicial law-making focuses on laying down broad principles which are applied in the case at hand.[41] Though the Court may sometimes limit the application of such rules to specific circumstances, it does not purport to elaborate on their precise details. This is left to formal legislative processes, doctrinal writing and future judicial decisions that provide for further development beyond the case in which the standard in question was established.

Accordingly, while the Court has an important role to play in the development and creation of the law, the manner and mode of its law-making is fundamentally different from that of a legislator. Hence, having both dispensed the fiction of a Court that is not involved in any law-making as a matter of principle as well as the picture of the Court acting as a legislator, the next section will discuss the true involvement of the ICJ, as a judicial body, in the development of rules of international law.

3. The Court as an Active Agent in the Development of International Law

Ranging from *Hudson* who contended that no system of law can solely depend on the law-making of political organs,[42] to *Lauterpacht* who proclaimed that "judicial law-making is a permanent feature of administration of justice in every society",[43] the importance of judicial involvement in the development of the law has now been widely established and accepted. Similarly, with regards to the fulfilment of the judicial role, law-development has been described as one of the "essential axes of jurisprudence"[44].

Before advancing on specific instances of the law-creative and law-developing role of the Court, it is necessary to first consider the standing of

41 *H. Lauterpacht* (note 2), 189 et seq.
42 *M. O. Hudson*, Progress in International Organization, 1932, 80.
43 *H. Lauterpacht* (note 2), 155.
44 *R. Kolb* (note 26), 1141.

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judicial decisions as a source of international law, for which Art. 38 of the ICJ Statute provides a starting point.

a) Art. 38 ICJ Statute: Judicial Determinations as a Subsidiary Means for the Determination of Rules of Law

With international treaty law, international customary law and general principles of law forming the primary sources of law, Art. 38(1)(d) ICJ Statute establishes,

> "subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as *subsidiary means for the determination of rules of law*" [emphasis added].

This was a clear change from the initial draft of 1920, which read:

> "The authority of judicial decisions and the opinion of writers as *means for the application and development of law*".[45]

The discussions of the members of the 1920 Committee of Jurists indicate that there was an intention to avoid any law-developing role for the PCIJ, which is evident in the Statute in its current form.[46] The change is truly significant as there is a fundamental difference between a means for the *determination of rules of law* and a means for the *application and development of law*.

Due to the wording of Art. 38(1)(d), a judicial decision cannot be regarded as a formal source of law and therefore cannot be relied upon in future cases before the Court. As a natural consequence, and by following a strict legal positivist approach to Art. 38, the starting point must be that the Court has no formal role in law-making as its decisions do not amount to formal sources of international law. However, the Court's pronouncements and its interpretations of the rules of international law carry the highest authority and strongly influence State behavior. Thus, many actors in the international sphere treat the decisions of the ICJ in a similar way as the primary sources in Art. 38.[47]

As the Court's decisions state the content of the three primary sources of international law, *Lauterpacht* concluded that they

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[45] *A. Pellet*, Article 38, in: A. Zimmermann/C. Tomuschat/K. Oellers-Frahm/C. J. Tams (note 17), 731, at 739 (emphasis added).

[46] *A. Pellet* (note 45), 853.

[47] *A. von Bogdandy/I. Venzke*, Beyond Dispute: International Judicial Institutions as Lawmakers, GLJ 12 (2011), 979, at 979 et seq.

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> "for most practical purposes … show, therefore, what international law is. In fact they are to a substantial degree identical with the sources of law enumerated in the first three paragraphs of Article 38. In form they may be merely a subsidiary means for determining what these sources are. The effect is the same."[48]

The current authors' view is that although the Court's decisions are no formal source of law per se, their impact remains significant as part of a broader process of law-making and legal development.[49] As *Venzke* has argued,

> "law is not fixed in and at its source; rather, it gains meaning and shape in its interpretation".[50]

Accordingly, the decisions of the Court decisively influence the content of the formal sources. To limit the Court's role in the development of the international legal system to the interpretation and application of existing rules to particular facts, denying the decision any effect beyond the case at hand, does not accord with reality.[51] In the following section, we will discuss four concrete ways in which the Court influences and, sometimes even, takes a lead in legal development without transgressing the boundaries set by the international community and the UN Charter.

b) How the Development Comes About

Though legal development through the judiciary is in many circumstances unavoidable and legitimate, it cannot amount to the standard method of legal reform. As *Lowe* has pointed out, ad hoc dispute resolution systems are "not a recipe for satisfactory resolution of a systematic problem".[52] The decisions of a court remain case-specific, and lack the detail for a system-wide application. This applies equally to advisory opinions, even of an abstract nature, as the scope and content of the opinion is still limited by the specific request made. At the same time, a lack of judicial innovation may receive as much criticism as progressive judicial law-making. The *Kosovo*

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48 *H. Lauterpacht* (note 2), 22.

49 *C. J. Tams*, The World Court's Role in the International Law-Making Process, in: J. Delbrück/U. Heinz/K. Odendahl/N. Matz-Lück/A. von Arnauld (eds.), Aus Kiel in die Welt: Kiel's Contribution to International Law. Essays in Honour of the 100th Anniversary of the Walther Schücking Institute for International Law, 2014, 139, at 144.

50 *I. Venzke* (note 22), 117.

51 *M. Shahabuddeen*, Precedent in the World Court, 1997, 68.

52 *V. Lowe*, The Function of Litigation in International Society, ICLQ 61 (2012), 209, at 216.

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opinion[53] serves as an example of a judicial pronouncement that received criticism for its overly cautious approach.[54] In the request on the legality of the unilateral declaration of independence of Kosovo from Serbia, the Court refrained from addressing some critical points, such as the right to secession, and instead made the disputable statement that the principle of territorial integrity only applied to the sphere of inter-State relations.[55] The opinion shows the difficulty the Court faces when trying to find the right balance between proper judicial restraint and an unduly conservative attitude.

The base line remains that the ICJ must apply the law, rather than deliberately change it so as to accord legal norms with the judges' own views. Nevertheless,

> "[t]his does not mean they do not in fact shape or even alter the law. But they do it without admitting it; they do it while guided at the same time by existing law; they do it while remembering that stability and uncertainty are no less of the essence of the law than justice; they do it, in a word, with caution."[56]

An important factor in the Court's shaping of the law as well as in the international community's perception as to the proper adherence of the ICJ to its judicial function is the giving of reasons. In order to play an influential role in the international legal discourse, the pronouncements of the Court have to persuade and the actors involved must be convinced of the quality of the decision.[57] Additionally, the lack of adequate reasoning by the ICJ can create an impression of arbitrariness and thereby risk losing the trust of States in the Court's judicial processes, an element fundamental to the international judicial system, which is based on voluntary submission. The perceived legitimacy or acceptability of a judgment will determine its effect on the subsequent development of international law.[58] Hence, the existence of adequate reasons in an advisory opinion is a prerequisite for any involvement of the Court in the development of international law. The following

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53 *Kosovo* Opinion (note 11).

54 *A. von Bogdandy/I. Venzke* (note 47), 983.

55 *Kosovo* Opinion (note 11), 437 para. 80. The finding of the ICJ is contrary to the practice of the UN Security Council which has applied the principle to situations involving non-State actors in the context of non-international armed conflict, e.g. in relation to conflicts in Croatia, Sudan and Georgia. *M. Kohen*, The Court's Contribution to Determining the Content of Fundamental Principles of International Law, in: G. Gaja/J. Grote Stoutenburg (eds.), Enhancing the Rule of Law Through the International Court of Justice, 2014, 139, at 145.

56 *H. Lauterpacht* (note 2), 75.

57 *C. J. Tams* (note 49), 144; *A. von Bogdandy/I. Venzke* (note 47), 990.

58 *N. Petersen*, Lawmaking by the International Court of Justice – Factors of Success, GLJ 12 (2011), 1295, at 1300.

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will outline four broad categories of methods by which the Court has shaped legal discourse and thereby developed the law, often quietly rather than revolutionary, adhering to a cautious approach in order to maintain the confidence of States in the legitimacy of the Court while at the same time responding to the needs of the international legal system.

(1) Precedents

The starting point in this discussion is that there is no formal rule of precedent in relation to the ICJ's jurisprudence as the decisions of the Court are no formal source of international law. Hence, States cannot rely on them in future cases. However, in contrast to the ICJ's express rejection of a law-making role, it shows a declared adherence to its previous pronouncements. In *Application of the Genocide Convention (Croatia v. Serbia)* the Court articulated the general test that it will not depart from settled jurisprudence unless it finds very "particular reasons" to do so.[59] Its reliance on past decisions seems to stem from an interest to uphold consistency, certainty and stability in the system and to avoid the appearance of any excess judicial discretion.

The *Wall* advisory opinion[60] serves as a good illustration of the importance of previous decisions in the Court's jurisprudence. In the opinion, the ICJ relied to a great extent on its previous case law when it found the existence of a right to self-determination of people living in non-self-governing territories[61] and made no less than 28 cross-references to its own past decisions over the course of only three pages of the opinion[62]. This shows, as *Hart* has argued, that the Court's adherence to precedent is not just about respecting its own case law, but has instead a central role in the Court's legal reasoning and its conception of its own role in the international system as a whole.[63]

Since the ICJ will uphold the legal position taken in a previous advisory opinion unless there are particular reasons to do otherwise, it "induces a belief in the correctness of the conclusions as it has drawn with respect to international law" and thereby "advances a claim to normative authority".[64]

59 *Application of the Convention on the Prevention and Punishment of the Crime of Genocide* (*Croatia v. Serbia*), Preliminary Objections ICJ Reports 2008, 412, at 428 para. 53.
60 *Wall* Opinion (note 11).
61 *A. Pellet* (note 45), 867.
62 *Wall* Opinion (note 11), 154 et seq.
63 *H. L. A. Hart*, The Concept of Law, 2nd ed. 1994, 132.
64 *G. I. Hernández* (note 36), 192.

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Such normative force that goes beyond the confines of the individual case will give the opinion an intrinsically law-making character and, as a result, it

> "redistributes argumentative burdens, shapes the normative expectations of all actors involved, and thus serves as a vehicle that drives international courts' role as interpreters and developers of the law, or more clearly, as lawmakers".[65]

Hence, precedents can be conceptualized as argumentative burdens on the party seeking to argue otherwise than the Court in a pertinent previous case, which is "independent from the status of precedent as a formal source of law or any express denial of its bindingness".[66] Because of this strong normative force as well as argumentative burden, the Court's opinions are very much akin to a source of law and, as a result, in many cases

> "actors in legal interpretation fight about the meaning of previous decisions just like they do about the meaning of instruments that come under the heading of sources".[67]

The Court will uphold its previous decisions which will guide States as a reflection of the current state of international law. Hence, *Lauterpacht* contended that

> in a society of States in which opportunities for authoritative and impartial statements of the law are rare, there should be a tendency to regard judicial determination as evidence or, what is in fact the same, as a source of international law.[68]

To conclude, by maintaining a certain legal position on several occasions, it is more difficult for a State to contend otherwise, putting the Court in a *de facto* law-making position. Judicial precedent thus often takes the form of quiet law-making over an extended period of time and thereby avoids accusations of judicial legislation.

(2) Treaty Interpretation

It is a misconception to believe that the Court's role in the development of international law diminishes in the case of treaty interpretation.[69] In fact, some of the Court's most significant opinions in terms of its law-creative effect stem from questions of treaty interpretation. Besides the development

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65 *I. Venzke* (note 22), 127.
66 *M. Jacob*, Precedents: Lawmaking Through International Adjudication, GLJ 12 (2011), 1005, 1023.
67 *H. Lauterpacht* (note 2), 123.
68 *H. Lauterpacht* (note 2), 14.
69 *K. Oellers-Frahm* (note 18), 1040; *H. Lauterpacht* (note 2), 27.

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of the law of treaties itself, there are two main ways in which the Court's advisory function can develop the law in such requests.

Firstly, in treaty interpretation cases the Court's role is central, as it must determine the object and purpose of the international agreement as intended by the parties or as would have been intended by the parties in the changed circumstances. The Court's involvement becomes even more significant in the context of dynamic treaty interpretation when it attributes a new meaning to the terms of a treaty based on an alleged intention of the parties that its provisions are not meant to be fixed, but rather may evolve over time. This puts a lot of power in the hands of the Court to effectively discover, or even establish, the content and scope of a treaty.

Secondly, the Court's interpretation of international agreements is influenced by what it thinks the customary law position on the question is and at the same time will alter that custom. The ICJ's handling of a request on specific treaty provisions will inevitably be guided by relevant existing customary law and, as a repercussion, may have an effect on such rules in their future application by States. Accordingly, there is a strong inter-relation between the two sources of law that may lead to a reassessment of a rule of customary international law in a case on treaty law.

An illustrative example for both points is the *Reparations*[70] opinion in which, through the interpretation of the UN Charter, the Court asserted that the UN has the capacity to bring a claim against a State for injuries suffered by one of the organization's employees. This finding was "standard setting"[71] and "a watershed in the development of the law of international organisations"[72] as the common understanding at the time was that only States held any form of legal personality in the international sphere. The Court had to define the object and purpose of the UN Charter and found that the organization would not be able to carry out its functions without having a certain degree of legal personality. The Court's teleological approach in treaty interpretation resulted in a ground-breaking change in customary international law. Hence, in *Reparations*, the ICJ clearly created a new rule of custom in a request on the true meaning of treaty provisions.

The *Wall* opinion also shows the Court's relevance in the development of the law in treaty interpretation requests. On the question of the legality of Israel's construction of the wall, the Court advanced on the interpretation

70 *Reparation for Injuries Suffered in the Service of the United Nations*, ICJ Reports 1949, 174.

71 *K. Oellers-Frahm* (note 18), 1041.

72 *S. Rosenne*, The Law and Practice of the International Court, 1920-1996, Vol. I, 3rd ed. 1997, 313.

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of the term "armed attack" under Art. 51 of the UN Charter. Contrary to the position taken by the United Nations Security Council, the Court limited "armed attack" in cases of self-defense to the sphere of inter-State relations and excluded it in cases of counter-terrorism offensives taking place within territories under the control of the State invoking Art. 51 UN Charter.

The *Wall* opinion serves as a concrete illustration of the difficulty of clearly defining what it was the Court did in this case – did it clarify the meaning of "armed attack" or did it develop the term or even create a new rule? Whatever verb is used, the impact of the opinion is paramount. Unfortunately, the *Wall* case is one of the few examples of advisory opinions that have not been fully complied with. Academics have voiced doubts as to the correctness of the Court's interpretation of Art. 51 and Israel did not demolish the wall found to be in violation of international law by the ICJ. However, since such a reception remains exceptional, it does not diminish the Court's authority and adds to the argument that the Court is involved in legal development.

While the ICJ has assumed a central role in the elucidation and development of treaty law, its impact in the creation and affirmation of rules of customary international law is even greater.

(3) Shaping of Customary International Law

Particularly in relation to custom, due to its unwritten form and constantly evolving content, the difference between determining and making law is one of degree rather than kind. It is often left to the judge to say what the law is and what is not. The judges have

> "to evaluate the conduct of the relevant players in society and to attempt to construct a legal norm that has developed from that conduct".[73]

As *Hernández* has argued,

> "the interpretation and application of unwritten law is an act of cognition, or of will; it is creative of the law".[74]

For the present discussion, the Court's role in its advisory function in the determination, clarification and development of legal norms of customary international law will be divided into two parts, with one standing at the beginning of the creation of a customary rule – the normative influence of

[73] *D. Akande* (note 32), 465.
[74] *G. I. Hernández* (note 36), 91.

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advisory opinions on State behavior – and the other being at a late stage of the development of custom – an advisory opinion providing conclusive evidence of the existence of custom.

i) Normative influence on State behavior and belief: as discussed in Part Two, the ICJ's advisory opinions are authoritative *erga omnes* and strongly influence the international community's understanding of international law as well as the normative expectations of States. By exerting such influence, actors in the international sphere orientate themselves and their actions on past opinions by the Court. Advisory opinions consequently have an impact on State practice and thus have a formative effect on custom.[75]

The Court in its advisory opinions takes part in the general legal discourse and while its pronouncements

> "are not a formal source of law, […] their persuasive authority can and does induce the creation of customary law or … in the case that they do not accept the opinion, to act contrary to it thereby preventing the creation of customary law."[76]

The difference between an advisory opinion with a normative character in these circumstances and a formal source of law lies in their impact on State behavior. Rather than laying down a clear rule which States directly rely on and follow, advisory opinions provide arguments and focal points in the process of creating a new formal rule of customary law. While an act contrary to the findings of an advisory opinion by the Court will not amount to a violation of international law, it will require justification. On the other hand, the Court's authority backs up State action in conformity with an advisory opinion.[77] Hence, in the early formative stages of a customary rule, an opinion of the Court can strongly influence not only the behavior of States, but also what they believe they are bound to do – i.e. *opinio juris*.

ii) Conclusive evidence of the existence of a rule of customary law: where State practice as well as *opinio juris* are already present, but there is a lack of formal appraisal of the new norm and hence a lingering uncertainty, the Court has the power to "translate in terms of express principle such changes as have in fact been accomplished".[78] Accordingly, this represents one of the last steps in the creation of a new customary law. Since the ICJ, in these cas-

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75 *C. Schaller*, Das Kosovo-Gutachten des IGH und seine Implikationen für die Vereinten Nationen, in: U. Halbach/S. Richter/C. Schaller (eds.), Kosovo – Sonderfall mit Präzedenzwirkung?, Stiftung Wissenschaft und Politik Studie Mai 2011, 7, at 14.

76 *K. Oellers-Frahm* (note 18), 1052.

77 *K. Oellers-Frahm* (note 18), 1047.

78 *H. Lauterpacht* (note 2), 173.

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es, asserts changes in international law that have in fact already occurred, it arguably only gives the impression of judicial legislation, rather than amounting to true judicial law-making.

Lauterpacht, however, disagrees and argues that whether the Court's opinion is viewed as evidence of the existence of the customary rule or as a source of law itself is a debate of little importance –

> "the distinction between the evidence and the source of many a rule of law is more speculative and less rigid than is commonly supposed"[79].

It is still wise to maintain the formal contrast between source and evidence here and rather describe the Court's role as a participant in a law-making process rather than the creator of a new rule of customary law as it should remain in the hands of States to bring to life such legal norms. While States determine the existence and largely the content of custom, the Court often remains the ultimate arbiter on the question[80] and therefore has an important role to play.

The view of the current authors is that the ICJ's involvement in the late stages of the development of custom is as important as its contributions in earlier phases of the process. While custom is the product of the will of States, not judicial pronouncements,

> "through its concrete interpretation and application to a given legal dispute or situation, judicial decisions can provide systematization and written confirmation of the existence of a legal rule".[81]

With State practice and *opinio juris* already clearly standing, the ICJ, by confirming a new legal rule, will shape the full range of implications arising from such a norm and will reveal its true significance.

In the *Nuclear Weapons* advisory opinion, the Court affirmed the existence of a customary rule that had developed over decades, giving expression to changes in the international community as well as international law. The ICJ held that the International Covenant on Civil and Political Rights did not cease to apply in times of armed conflict[82] and that States are under a duty to protect the environment[83]. *Sands* argues that the *Nuclear Weapons* opinion recognized for the first time that norms of international environmental law have customary international law status which are equally appli-

79 *H. Lauterpacht* (note 2), 21.
80 *A. Roberts*, Traditional and Modern Approaches to Customary International Law: A Reconciliation, AJIL 95 (2001), 757, at 772.
81 *G. I. Hernández* (note 36), 91.
82 *Nuclear Weapons* Opinion (note 6), 240, para. 25.
83 *Nuclear Weapons* Opinion (note 6), 241, para. 29.

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cable in times of armed conflict.[84] Furthermore, the formal acknowledgement that international humanitarian law and human rights law apply simultaneously in armed conflict situations provides a benchmark in the international legal system as a whole. Still, the opinion was not "revolutionary", but rather "formally confirmed an 'evolutionary' development of the twentieth century".[85] The rules as to the mutual application of the two systems as well as the States' environmental law duties did exist before the Court's advisory opinion, but it was a crucial step in their evolution to be formally confirmed by the ICJ.

To conclude therefore, the Court has a role to play throughout the development process of customary law. Its opinions induce State behavior and influence the normative expectations of actors at the international level. They confirm already existing practice and thereby achieve clarity and coherence in the complex system of customary rules. In the process, the Court can shape the content as well as the wider ramifications of the legal norm. Hence, its role in relation to customary international law is vital as it is involved in the clarification, determination, development and creation of customary rules simultaneously.

(4) Pronouncements in the Absence of a Generally Accepted Rule

Both in relation to treaty law and customary international law, the ICJ sometimes affirms a rule that arises from developments in the international community and the international legal system that are still somewhat implicit and not yet clearly accepted in custom or international agreements. Particularly in relation to customary law, there is an overlap between the current and the previous sections as customary norms in many cases will not be unequivocally established up until the point the Court makes a pronouncement to the effect. As *Kolb* said,

> "[t]he way that States actually behave and interact, keeping customary law in constant flux, gives to the rules of international law an underlying uneasiness, an unending propensity to movement and adjustment, now expanding, now contracting … The jurisprudence frequently needs to clarify what is, and what is not, international law.[86]

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84 *P. Sands/J. Peel*, Principles of International Environmental Law, 3rd ed. 2012, 797.

85 *D. Stephens*, Human Rights and Armed Conflict – The Advisory Opinion of the International Court of Justice in the Nuclear Weapons Case, Yale Human Rights & Development Journal 4 (2001), 1, at 23.

86 *R. Kolb* (note 26), 1142.

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While the distinction between a decision by the Court that creates a new rule that is in line with developments at the international level where there had remained conflicting practice and a confirmation of a rule that lacked formal confirmation might be slim, it still warrants separate attention.

A good example of judicial rule-making in an area of the law where there remained uncertainty is the *Genocide*[87] advisory opinion. The request for the opinion was about the admissibility and effect of reservations to multilateral treaties in the event of objections or lack thereof by other parties to the treaties. The crux of the question was the severability of reservations, an area that at the time did not have a generally accepted legal rule. After finding that the States parties concluded the Genocide Convention for humanitarian and civilian purposes, the Court established (or confirmed) the customary character of the prohibition of genocide and limited the use of reservations to all international conventions with humanitarian objections. Allowing a curtailment of the high principles enshrined in the conventions would be against their very purpose or *raison d'être*.[88] Therefore, while finding that there existed no binding rule on the subject, the ICJ held that

> "[i]t must clearly be assumed that the contracting States are desirous of preserving intact at least what is essential to the object of the Convention".[89]

The International Law Commission later adopted the Court's guidelines in section 2 of the Vienna Convention on the Law of Treaties.

Hence, the Court in its advisory function has not shied away from contributing to the establishment of new rules of treaty and customary international law in cases where there was ambiguity before. Its involvement in the development of international law therefore is not limited to a passive role of formal confirmation. Still, the Court is wary of not venturing out too far onto the thin ice of law-making. As discussed above, there are plenty of internal and external obstacles in the way of the Court becoming a primary legislator so that any real concerns in this regard are misplaced.

In the end, States have the final say whether a rule established by the Court becomes part of the body of international law. Before States confirm the new norm by way of State practice or the conclusion of an international agreement, the ICJ's decisions

> "only serve as precedents, as guidelines, or as authoritative pronouncements of considerable weight, but no more".[90]

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87 *Reservations to the Convention on Genocide*, ICJ Reports 1951, 15.
88 *Genocide* Opinion (note 87), 23.
89 *Genocide* Opinion (note 87), 27.
90 *K. Oellers-Frahm* (note 18), 1054.

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The advisory opinion will have to be persuasive in its reasoning and its findings. Lacking any formally coercive power, its impact is dependent on the reception in the general legal discourse by all actors in the international sphere, providing a natural barrier to judicial activism. As much as it is a truism that the Court is a participant in the development of international law, so it is self-evident too that the ICJ is not the only actor indispensable in the process. States, international organizations and academics all to a different degree weigh in, making the law-making process potentially more complex, but also positively more nuanced.

IV. Concluding Remarks

Whether covertly or overtly, whether developing or law-making, the ICJ's advisory opinions have and will in the future shape international law. In a complex and sometimes turbulent system of law like the international legal system, the Court has the power to increase coherence and to respond to new developments in the international community and the legal environment. While disagreement will remain on where the exact line between permissible and impermissible judicial activities lies, it is the international community as a whole that has chosen to give the Court such an essential role in the process of international law-making. It is the States which have decided to attribute normative authority to the Court's case law, making it a reference point, and to adjust their behavior in alignment with the Court's pronouncements. It is the Court that relies heavily on its own jurisprudence, illustrating its own claim to semantic authority and the correctness of its decisions, and it is academic writers who discuss the case law of the Court at length when outlining the content of international law. As all actors, including the ICJ itself, are mindful to keep the Court within its proper role and as there are inherent safeguards in the process, the fear of judicial activism is misplaced.

Still, the ICJ will continue to face critique when its involvement in the law-making process is too bold as it will when it renders overly conservative opinions. Such high scrutiny itself highlights the crucial role and wide influence of the Court's work. As *Rosenne* has said,

> "for those who practise international law, judicial decisions, and especially those of the International Court, cannot be relegated to any subsidiary position".[91]

[91] *S. Rosenne* (note 7), 1554.

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In the end the wheels will keep on spinning and the Court will remain an active agent in the development of international law.

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Annex 546

N. Lanzoni, "The Authority of ICJ Advisory Opinions as Precedents: The Mauritius/ Maldives Case," *The Italian Review of International and Comparative Law*, 2022, pp. 296-322, pages 307-313

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The Authority of ICJ Advisory Opinions as Precedents: The *Mauritius/Maldives* Case

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Abstract

The role played by precedents in international law is usually addressed with regard to their bearing on other judicial decisions and their contribution to the development of international law. Recently, the International Tribunal for the Law of the Sea ("ITLOS") has offered a novel interpretation of the legal effects of the International Court of Justice's ("ICJ") advisory opinions as precedents. In *Mauritius/Maldives*, the ITLOS rejected two of the Maldives' preliminary objections – based on the existence of a dispute between Mauritius and the United Kingdom over the sovereignty of the Chagos Islands – , arguing that the 2019 ICJ advisory opinion on the separation of the Chagos Archipelago from Mauritius had resolved the dispute in favour of the latter. In light of the ITLOS's decision, the present contribution is aimed to provide some reflections on the authority of ICJ advisory opinions as precedents and on their legal effects in international law.

Keywords

formal and normative Authority – ICJ advisory opinions – precedents – Chagos Islands – *Mauritius/Maldives* case – substantive *res judicata*

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Charter,[65] "even where the Request for an Opinion relates to a legal question actually pending between States".[66] As explained by the ICJ in *Peace Treaties*: "The consent of States, parties to the dispute, is the basis of the Court's jurisdiction in contentious cases. The situation is different in regard to advisory proceedings, [where] the Court's reply is only of an advisory character: as such, it has no binding force".[67]

Instead, according to Article 38(1)(d) of the ICJ Statute, advisory opinions constitute "subsidiary means for the determination of rules of law", that is to say "material sources having a special degree of authority".[68] The full extent of this may be better understood in the light of the normative authority of ICJ advisory opinions as precedents that bear on the determination of future decisions and contribute to the development of international law.[69]

Another formal effect of an advisory opinion is that the requesting organ "must duly take account of it".[70] This formula translates into the obligation, following from both customary UN law and a conventionally oriented interpretation of Article 2(2) of the UN Charter,[71] according to which, "if the requesting organ must find a purely legal solution to the dispute, or desire to do so, it will [have] to accept as authoritative the conclusion expressed in the opinion".[72] This effect is also further complemented and enhanced by the normative authority of advisory opinions as precedents.

3.2 *Normative Authority*

As regards normative authority – which, as said, should be considered as composed of the ICJ *stricto sensu* authority and of both the persuasive and semantic authority of the advisory opinion itself – ICJ advisory opinions legitimise the adoption of any conduct in accordance with them.[73]

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65 "Each Member of the United Nations undertakes to comply with the decision of the International Court of Justice in any case to which it is a party".

66 *Peace Treaties* case, *cit. supra* note 39, p. 71.

67 *Ibid.* Specific legal instruments may provide for the advisory opinion to have binding effects, see AGO, "'Binding' Advisory Opinions of the International Court of Justice", American Journal of International Law, 1991, p. 439 ff.

68 THIRLWAY, *The Sources of International Law*, 2nd ed., Oxford, 2014, p. 131.

69 See *infra* Subsection 3.2.

70 KOLB, *cit. supra* note 39, p. 1097.

71 *Ibid.* Art. 2(2) of the UN Charter establishes that "all Members [...] shall fulfil in good faith the obligations assumed by them in accordance with the present Charter".

72 Quoted and translated in *ibid.* This does not, however, limit the *political discretion* of the requesting body to resolve the issue in a different manner, *ibid.*, p. 1098.

73 OELLERS-FRAHM, *cit. supra* note 63, p. 1987.

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This legitimation leads to the production of different effects depending on which "legal question"[74] is the subject of the request. In theory, the ICJ can render an advisory opinion on "any legal question".[75] In practice, it is useful to distinguish three types of legal questions:[76] legal questions centred on the interpretation/application of conventional and/or customary rules of international law;[77] those relating to the interpretation/application of UN law;[78] and those underlying a dispute between two or more States or other entities.[79]

Advisory opinions on the first type of legal question enjoy an obvious normative authority. On the one hand, as precedents they represent a yardstick that is difficult to circumvent in the determination of future questions/disputes.[80] As emphasised by the ICJ in *Croatia v Serbia*:

> [The Court] will not depart from its settled jurisprudence unless it finds very particular reasons to do so. [W]hile '[t]here can be no question of holding [a State] to decisions reached by the Court in previous cases' which do not have binding effect for that State, in such circumstances

74 By "legal question" is understood, in a very general way, "a request […] to examine a situation by reference to international law", *Chagos* case, *cit. supra* note 9, para. 58.

75 ICJ Statute, Art. 65(1) and UN Charter, Art. 96(1).

76 This distinction is borrowed from FROWEIN and OELLERS-FRAHM, "Article 65", in ZIMMERMANN et al. (eds.), *The Statute of the International Court of Justice: A Commentary*, 2nd ed., Oxford, 2012, Vol. II, p. 1065 ff., p. 1628, para. 64.

77 Among others, *Reservations to the Convention on Genocide*, Advisory Opinion of 18 May 1951, ICJ Reports, 1951, p. 15 ff. (*Convention on Genocide*) and *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion of 8 July 1996, ICJ Reports, 1996, p. 226 ff. (*Nuclear Weapons*).

78 Among others, *Admission of a State to the United Nations* (*Charter, Art. 4*), Advisory Opinion of 28 May 1948, ICJ Reports, 1948, p. 57 ff. (*Admission of a State*) and *Competence of Assembly regarding Admission to the United Nations*, Advisory Opinion of 3 March 1950, ICJ Reports, 1950, p. 4 ff. (*Competence of Assembly*).

79 Among others, *Wall* case, *cit. supra* note 49 and *Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo*, Advisory Opinion of 22 July 2010, ICJ Reports, 2010, p. 403 ff. (*Kosovo*). However, this distinction is merely illustrative and several advisory opinions deal with more than one type of legal question at a time, among others, *Reparations for Injuries Suffered in the Service for the United Nations*, Advisory Opinion of 11 April 1949, ICJ Reports, 1949, p. 174 ff. (*Reparations for Injuries*) and *Legal Consequences for States of the Continued Presence of South Africa in Namibia* (*South West Africa*) *notwithstanding Security Council Resolution 276* (*1970*), Advisory Opinion of 21 June 1971, ICJ Reports, 1971, p. 16 ff. (*Namibia*).

80 See *supra* Section 2.

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> '[t]he real question is whether [...] there is cause not to follow the reasoning and conclusions of earlier cases'.[81]

On the other hand, while not constituting a source of production, advisory opinions contribute to the development of international law.[82] For instance, in *Convention on Genocide* the ICJ introduced the innovative criterion of the conformity with the object and purpose of the treaty in order to scrutinise the legitimacy of making reservations to it.[83] This criterion quickly became the generally accepted one and made its way through the work of the International Law Commission on the law of treaties,[84] and the 1969 Vienna Convention on the Law of Treaties.[85]

Another example is *Nuclear Weapons*, where the ICJ found that "the protection of the International Covenant on Civil and Political Rights does not cease in times of war"[86] and that "the existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law".[87]

Advisory opinions on the second type of legal question, that is, those relating to the interpretation/application of UN law, are a subset of those on the first. They nevertheless produce substantially binding effects vis-à-vis the requesting organ and other UN bodies.[88] For instance, in *Admission of a State* and in the ensuing *Competence of the Assembly*, the ICJ clarified that the conditions for the admission of States to the UN laid out under Article 4(2) of the UN Charter[89] are exhaustive – in the sense that a UN Member is not legally

81 *Application of the Convention on the Prevention and Punishment of the Crime of Genocide* (*Croatia v. Serbia*), Judgment of 18 November 2008, ICJ Reports, 2008, p. 412 ff., para. 53 quoting *Land and Maritime Boundary between Cameroon and Nigeria*, Judgment of 11 June 1998, ICJ Reports, 1998, p. 275 ff., para. 28. The ICJ is obviously referring to its decisions in general, not only to advisory opinions.

82 On the contribution of ICJ advisory opinions to the development of international law, see MAYR and SINGER, "Keep the Wheels Spinning: The Contributions of Advisory Opinions of the International Court of Justice to the Development of International Law", Heidelberg Journal of International Law, 2016, p. 425 ff.

83 *Convention on Genocide* case, *cit. supra* note 77, pp. 29–30.

84 See International Law Commission, Draft Articles on the Law of Treaties with commentaries, 1966.

85 Vienna Convention on the Law of Treaties, adopted 23 May 1969, entered into force 27 January 1980, Art. 19(c).

86 *Nuclear Weapons* case, *cit. supra* note 77, para. 25.

87 *Ibid.*, para. 29.

88 KOLB, *cit. supra* note 39, p. 1098.

89 "The admission of any such State to membership in the United Nations will be effected by a decision of the General Assembly upon recommendation of the Security Council".

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entitled to make admission dependent on conditions not expressly provided for therein – [90] and that the lack of the Security Council's ("SC") recommendation cannot be interpreted as representing an "unfavourable recommendation".[91]

Again, in *Reparation for Injuries*, the ICJ famously established that the UN, as an international organisation endowed with functional legal personality, enjoys the implied power of acting in diplomatic protection in favour of its officials,[92] also against those States which are not parties to it.[93]

Advisory opinions on the third type of legal question, that is, those underlying a dispute between two or more States or other entities, are the most problematic. An advisory opinion can undoubtedly deal with a legal question underlying an international dispute. This is confirmed by the ICJ Rules of Court,[94] the ICJ own case law[95] and international scholarship.[96] However, this circumstance risks contradicting the fundamental principle of consensual jurisdiction in international law.[97] In this regard, the ICJ qualifies the absence of consent of one of the parties to the dispute as a potential "compelling reason" for choosing not to answer the legal question in order to protect its judicial integrity.[98]

This could be the case if the legal question has a markedly bilateral character and the request for an advisory opinion embodies a stratagem to circumvent the principle of consensual jurisdiction.[99] Conversely, the ICJ will respond to the issues raised by the request whenever the legal question can be located in a broader frame of reference which presents some trait of multilateralism – such as, for example, a legal question pertaining to a dispute threatening international peace and security or the violation of rules *erga omnes* (*partes*) – [100]and

90 *Admission of a State* case, *cit. supra* note 78, pp. 61–62.
91 *Competence of the Assembly* case, *cit. supra* note 78, p. 9.
92 *Reparations for Injuries* case, *cit. supra* note 79, pp. 178–180 and 182–184.
93 *Ibid.*, p. 185.
94 ICJ Rules of Court (1978), Art. 102(3).
95 See *Namibia* case, *cit. supra* note 79, para. 34 and *Chagos* case, *cit. supra* note 9, para. 89.
96 See D'ARGENT, "Article 65", in ZIMMERMANN et al. (eds.), *The Statute of the International Court of Justice: A Commentary*, 3rd ed., Oxford, 2019, p. 1787 ff., p. 1798. See also CRESPI REGHIZZI, "The International Court of Justice's Advisory Jurisdiction, Dispute Settlement and State Consent: An Historical Perspective", Rivista di diritto internazionale, 2021, p. 139 ff.
97 See HAMBRO, "The Authority of the Advisory Opinions of the International Court of Justice", International and Comparative Law Quarterly, 1954, p. 2 ff., p. 11.
98 See *Kosovo* case, *cit. supra* note 79, para. 30 and *Chagos* case, *cit. supra* note 9, para. 65.
99 KOLB, *cit. supra* note 39, p. 1073.
100 D'ARGENT, *cit. supra* note 96, p. 1807.

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from which those issues are inseparable.[101] In such cases, "the common interest [...] overrides any bilateral concern, so that the circumvention argument should fail".[102]

This approach allows the ICJ to influence the legal and political development of a dispute independently of the consent of the parties involved. After all, by answering the legal question, the ICJ will inevitably also tend to "rule" on the merits of the relevant dispute.[103] The advisory opinion will thus enjoy a normative authority with uncertain legal effects.

First, if the ICJ finds that a State is to be held responsible for a violation of international law, the advisory opinion will legitimise the adoption of consistent measures. In *Namibia*, for instance, the ICJ, having confirmed that South Africa was in continuing breach of SC Resolution 276 (1970), enjoined it to withdraw its administration from Namibia and set out the legal consequences of its finding for third States, namely that they should recognise the illegality and invalidity of South Africa's presence in Namibia and abstain from sending diplomatic missions or consular agents there and/or suspend their economic or other relationships with South Africa concerning Namibia.[104]

Similarly, in *Chagos*, having found that the decolonization of Mauritius has not been conducted in compliance with the principle of self-determination, the ICJ requested the UK to immediately put an end to its administration of the Chagos Islands and called third States to co-operate to achieve this end.[105] In *Wall*, the ICJ also noted that Israel was under an obligation to make reparation for the damages arising from the unlawful construction of the wall in the Occupied Palestinian Territory.[106] The fact that, in these cases, the ICJ qualified the violation as of *erga omnes* in nature,[107] would also legitimise the adoption of countermeasures/lawful measures by third States against the wrongdoer.[108]

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101 See *Western Sahara*, Advisory Opinion of 16 October 1975, ICJ Reports, 1975, p. 12 ff., para. 38, *Wall* case, *cit. supra* note 49, para. 50 and *Chagos*, case, *cit. supra* note 9, para. 88.

102 D'ARGENT, *cit. supra* note 96, p. 1807.

103 As HAMBRO notes, "if the Court is asked to give an Advisory Opinion, either about an entire conflict between two States or on the legal issues at stake in such a conflict, the case will in very many respects be like a contentious case", *cit. supra* note 97, p. 7.

104 *Namibia* case, *cit. supra* note 79, paras. 119 and 123–124.

105 *Chagos* case, *cit. supra* note 9, para. 182.

106 *Wall* case, *cit. supra* note 49, paras. 152–153.

107 *Namibia* case, *cit. supra* note 79, para. 126; *Chagos* case, *cit. supra* note 9, para. 180 and *Wall* case, *cit. supra* note 49, para. 155.

108 D'ARGENT, *cit. supra* note 96, p. 1809. The adoption of "lawful measures" by third States requires that the act violates an *erga omnes* obligation, see International Law Commission, Draft Articles on Responsibility of States for Internationally Wrongful Acts, 2001, Art. 54.

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Second, and most importantly for the present analysis, although it is common knowledge that "[advisory] opinions do not have the authority of *res judicata*",[109] the relationship between the normative authority of ICJ advisory opinions and the principle of *res judicata* remains ambiguous. It is worth recalling that this principle entails that international courts and tribunals' final adjudication is "conclusive", both in the sense that the issue so decided may not be "relitigated" (formal *res judicata*),[110] and that the decision is binding upon the parties and must be implemented in good faith (substantive *res judicata*).[111]

From a formal point view, it does not seem too far-fetched to contend that, actually, ICJ advisory opinions do "enjoy a kind of factual *res judicata* status".[112] In fact, even in the absence of a specific prohibition, it is hard to imagine that the ICJ would accept to render more than one opinion on the same legal question.[113] Such a request would appear to be contrary to Article 2(2) of the UN Charter and the ICJ judicial integrity.[114]

On the other hand, arguing that the normative authority of ICJ advisory opinions produces legal effects analogous to that of substantive *res judicata* is more controversial. This is because, as said, advisory opinions have no binding effect on the parties and, therefore, cannot resolve the underlying dispute.[115]

In the past, however, the possibility that advisory opinions could produce such an effect had not been ruled out. In *Eastern Carelia*, for example, the PCIJ, requested to give an advisory opinion on the legal status of the region of Eastern Carelia in accordance with the 1920 Treaty of Peace between Finland and the Soviet Union, noted that "answering the question would be substantially equivalent to deciding the dispute between the parties".[116] International

109 *Peace Treaties* case, *cit. supra* note 39, Dissenting Opinion of Judge Winiarski, p. 91. See also *ibid*., Dissenting Opinion of Judge Zorčič, p. 101.

110 See, for instance, ICJ Statute, Art. 60: "The judgment is final and without appeal (…)".

111 See, for instance, ICJ Statute, Art. 59: "The decision of the Court has (…) binding force (…) between the parties and in respect of that particular case". As noted above, advisory opinions do not constitute a "decision" within the meaning of Art. 59, see *supra* Subsection 3.1. On the principle of *res judicata* see DODGE, "Res Judicata", in PETERS (ed.), *Max Planck Encyclopaedia of Public International Law*, online ed., Oxford, 2006 and KULICK, "Article 60 ICJ Statute, Interpretation Proceedings, and the Competing Concepts of *Res Judicata*", Leiden Journal of International Law, 2015, p. 73 ff.

112 KOLB, *cit. supra* note 39, p. 1096.

113 D'ARGENT, *cit. supra* note 96, pp. 1809–1810.

114 This point is further discussed in KOLB, *cit. supra* note 39, p. 1096.

115 See *supra* Subsection 3.1.

116 *Status of Eastern Carelia*, Advisory Opinion of 23 July 1923, PCIJ Reports, Series B, No. 5, p. 1 ff., p. 29. International scholarship tends to disregard this advisory opinion as of little significance due to the special circumstances surrounding it (D'ARGENT, *cit. supra* note 96, p. 1084). However, the passage quoted does not relate to the reasons behind the

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judges and authors also likened advisory opinions to declaratory judgments,[117] and qualified them as "quasi-judicial appraisal" and "some kind of judgment".[118]

It is true that the ICJ has been much more cautious in this respect,[119] but it has also implicitly admitted that an advisory opinion can *indirectly* resolve a dispute.[120] Moreover, as noted, the ICJ has never hesitated to give its opinion on the international responsibility of the parties involved, including the ensuing legal consequences. All in all, it seems therefore reasonable to argue that the fact that advisory opinions do not enjoy the authority of *res judicata*, "is not sufficient to deprive [them] of all the moral consequences which are inherent in the dignity of the organ delivering the opinion, or even of its legal consequences".[121]

In order to solve this conundrum and to assess whether ICJ advisory opinions as precedents can produce legal effects analogous to that of substantive *res judicata*, the present contribution will now provide an in-depth analysis of the impact that *Chagos* had in determining the ITLOS's decision to retain its jurisdiction in the *Mauritius/Maldives* case. It is believed that this case is of particular significance since, for the first time, an international tribunal has recognised to an ICJ advisory opinion the legal effect of settling a dispute between two States.

4 The Mauritius/Maldives Case

4.1 *The ITLOS's Decision*

On 28 January 2021, the Special Chamber established within the ITLOS handed down its decision on the admissibility of the dispute concerning the delimitation of the maritime boundary between Mauritius and Maldives in the Indian Ocean (*Mauritius/Maldives*).

PCIJ's refusal to render an advisory opinion on the dispute between Finland and the Soviet Union. Rather, it is an *obiter dictum* on the substantive *res judicata* effects of an advisory opinion.

117 GOODRICH, "The Nature of the Advisory Opinions of the Permanent Court of International Justice", American Journal of International Law, 1938, p. 738 ff., p. 756.

118 *Certain Expanses of the United Nations* (*Article 17, paragraph 2, of the Charter*), Advisory Opinion of 20 July 1962, Dissenting Opinion by Judge Koretsky, ICJ Reports, 1962, p. 151 ff., para. 2.

119 Note the ICJ's remarks on the existence of a dispute between Mauritius and the UK in *Chagos*, see *infra* Subsection 4.2.

120 "The purpose of the advisory function is not to settle – *at least directly* – disputes between States", *Nuclear Weapons* case, *cit. supra* note 77, para. 15 (emphasis added).

121 *Peace Treaties* case, *cit. supra* note 39, Separate Opinion of Judge Azevedo, para. 3.

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Annex 547

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Affirming the Principle of Good Neighborliness in International Relations

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Abstract: The territory is the fundamental part of a state. It is the geographical space where a state exercises its full sovereignty, asserts its authority and possesses its national resources and wealth. A state territory is a land area under the sovereignty of a given state, in other words, an area in which the state exercises supreme power and which it controls, organizing itself in an administrative relationship and establishing its legal regime. One of the components of a state's sovereignty is its territorial supremacy. The nature of the territorial supremacy of state sovereignty and of the state as a whole cannot be derived from any legal category. The territory of a state includes the land, inland waters and the territorial sea, the airspace above the state. There are also international rivers, streams and canals, which may lie within the territory of one or more states. An international territory is an area of international law which is not subject to the sovereignty of any state and which is open to all states in accordance with international legal standards, the airspace above it as well as over an exclusive economic zone, the seabed and ocean floor outside the country, outer space including the Moon and other celestial bodies.

Keywords: *principle of good neighborliness, international relations, international law.*

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1. Introduction

The principles of international law are regarded as guiding principles with a general content, distinct from the rules of positive international law, which it transcends, but with a meaning distinct from that of the general principles of law identified in the legal order of States, expressly provided by Article 38 of the ICJ Statute. For these reasons, they can be analyzed in a different way, not only in the strict sense of a source or formal source of international law, but beyond this category, as an element belonging to the substratum of all international norms and the foundations of the international legal system.

Beyond the differences in the terms used to designate the category of principles of international law, their importance and particular role for international law as a whole cannot be disputed (Ciucă, 2019; Păvăleanu, 2018, Păvăleanu, 2019), as the influence of this category of rules is diffused throughout the international legal system, playing an essential role, first in the process of creating the rules of international law, and subsequently in the process of applying them. Principles have played an essential role for the international legal order in the construction of rules in new areas of international law, which required normative regulation and for which they provided a starting point. Reference is made in specialized literature to the creation of norms of space law, for example, whose principles proclaimed at the initial stage of crystallization of the normative framework are already applicable.

As basic pillars of the international legal system, we specify that these principles are the expression of the ideas of law and justice and make a special contribution to influencing the international legal order from the perspective of their superiority over other rules of positive international law. The content and application of these rules depend on the observance of the principles of international law, because, in this way, the balance of the normative framework is ensured, which cannot pursue goals or objectives contrary to the principles that constitute, moreover, the core of international law.

The inconsistency in the implementation of the principles continues to exist because states are economically and politically divided and, unfortunately, relations between some of them are strained. What is certain is that the fundamental principles of international law remain legal standards of the utmost importance and generality for all states in the world. These can be regarded as genuine constitutional principles of the international

community, which concern the interpretation and application of international law as a whole and are identified with the foundations of the international legal system (Moldovan, 2019, pp. 93-94).

2. Good neighborliness - a principle of international law

The terrestrial neighborhood is the land area of the territory, which occupies the soil and subsoil, respectively the state has absolute sovereignty over this area. By terrestrial neighborhood is meant the various forms of cooperation that may exist between neighboring countries in their land border areas, as well as the principle of settling disputes that may arise in the land sectors of the areas. „Human life poses, in the land border area, a large number of problems that need to be regulated by neighboring states. No state can exercise sovereignty over the territory of another state, but through international agreements, other states and their citizens are allowed access to another territory with rights, often with reciprocity" (Coman & Gal, 2018, p. 97). Thus states grant each other the right of transit of road, air or sea means of transport.

The terrestrial space of the state, from the point of view of its legal status, is divided into two categories: the space that constitutes the territory of the state and the space that is outside the borders of the state territory. Such spaces - state territory and international territory are separated from each other by borders. The boundaries are the lines indicated on the maps, and where possible on the ground and on the vertical surfaces that run along these lines to the limit of the Earth's space with the cosmos and theoretically to the center of the Earth. The boundaries of state territory as part of the earth's space are determined by its borders that divide the territories of neighboring states or that separate the state territory from non-state territory. Their crossing must be properly established and internationally recognized.

International neighborhood is related to border areas. It is obvious that a state cannot be conceived without territory and physical borders. The land border separates the land territory of one state from the similar territory of another state and is usually established by agreement between neighboring states, taking into account the terrain. „A state border is the real or imaginary line drawn between different points on the surface of the earth which separates the territory of a state from the territory of another state or from adjoining areas not subject to the sovereignty of any state. It is essentially the legal limit of the area in which a state exercises its full and exclusive sovereignty. The state border is inviolable. International law knows two kinds of state borders: natural and conventional (geometric)' (Arhiliuc et

al., 2012, p. 102). There are two types of frontiers, the first being natural ones that separate the states by natural elements such as mountains, sea or river borders, forest borders, and the second type of borders, artificial ones, astronomical and geometric borders. There are also borders, taking into account that a state's sovereignty also extends to its airspace. It turns out that all states are surrounded by areas of border separation. The main purpose of borders is to protect the state by separation.

„Good neighborliness has manifested itself in relations between states and has gradually become a genuine principle of international law. Good neighborliness is not only a condition that requires the development of normal relations between neighboring states from a geographical point of view, but also a basic principle of international law. The need to maintain fair relations and to provide support, cooperation and assistance to neighboring states leads states to promote good neighborliness in their relations with each other. The first rules to be found in international law are those between neighboring countries" (Deaconu, 2005, p. 46).

The fundamental principles of international law have manifested themselves in the relationship of some neighboring countries in order to generalize the all-encompassing character they have today. The promotion of good unneighborly relations has always been a fundamental objective of states' policies, where they have been reflected in bilateral treaties - some of which are entitled good neighborly treaties. Over time, the neighboring states experienced more and more concrete connotations related to the way in which the problems between good neighbors had to be maintained and solved, primarily as a general principle of peaceful coexistence between neighboring states. From a legal point of view, good neighborliness has been proven to be a very important principle, as well as other principles of international law. Under such circumstances, relations between neighbors must be strengthened, in particular by legal means, recognized by international acts and based on general aspects of morality, tolerance and abstention from any action that would harm the interests of other parties. Any principle must form guiding ideas of the content of all legal norms contained in a given branch. In legal doctrine it is mentioned that a general concept has the advantage of being applicable to a large number of concrete and different situations - deduced from concrete rules. At the same time, these principles of law help to understand more easily the significance of the legal norms governing the interested relations that establish peace between neighboring states.

The legal nature of good neighborliness is the general legal concept applicable to social relations that take place between the states and that

govern the conduct of legal subjects, a principle recognized by legal doctrine and practice. The principle of neighborliness also has a universal character and is a necessary component of peaceful relations between states. *The imperative application of rules based on neighborliness relations helps to maintain a global balance of power and create an understanding based on mutual respect between states.* These rules as an essential principle imply the abstention from committing any action that could worsen the relations between states and the undertaking of measures for ensuring the normal development of the interstate relations.

Good neighborliness is a natural relationship that must exist and manifest in relations between states and between people. This state of affairs must be a permanent and continuous necessity, an imperative of international relations. The willingness of states to promote and respect the principle of good neighborliness is expressed not only in the promotion of general principles but also in concrete obligations. A series of obligations on the part of states are supposed to support the application of this principle of international law. Some of these obligations have become principles of international law, given their legal nature and importance.

Cooperation is first and foremost a major requirement for ensuring world peace. International cooperation is the main tool in solving the urgent global problems of mankind. It has become an objective necessity in various sectors. Cooperation is a form of international cooperation between the states of the world on the basis of agreements, the common use of financial, material and technological resources of all partners to achieve mutual benefits. The principle of cooperation between states is one of the basic principles of international law. In particular, the Organization pursues the objective of "implementing international cooperation in solving international problems of an economic, social, cultural and humanitarian nature" - According to Article 3(3) of the UN Charter (Năstase et al., 2007, p. 16). Since the adoption of the UN Charter it has been recorded on the maps of many international organizations, in international treaties, numerous resolutions and declarations.

With the adoption of the UN Charter, it has taken its place among other principles that are mandatory for compliance with modern international law, meaning+, in principle, the obligation of states to use the method of cooperation, not confrontation, to solve problems. However, this principle alone does not oblige the state to initiate concrete negotiations or, in particular, in contractual relations with any other state at the latter's request. Cooperation as such is the duty of all states only in the maintenance of international peace and security - According to Article 11 of the UN

Charter (Năstase et al., 2007, p. 17), formulated in the Declaration on the Principles of International Law on Friendly Relations and Cooperation between States in accordance with the UN Charter adopted by the UN General Assembly on 24 October 1970, and in the Final Act of the Conference on Security and Cooperation in Europe of 1975. States are obliged to cooperate with each other in various fields of international relations in order to maintain international peace and security and to promote international economic stability and progress, the general welfare of peoples and international cooperation without discrimination. One of the objectives of the United Nations is the implementation of international cooperation in solving international economic, cultural and humanitarian problems and in promoting and developing respect for human rights and fundamental freedoms for all, without distinction, without race, sex, language and Charter. Such cooperation should be carried out by regardless of the differences between their political, economic and social systems. It is an integral part of the wider principle of international law - the principle of peaceful coexistence. At the national level, collaboration between countries can support and strengthen national efforts to develop healthcare, as well as broaden the prospects for best practice and results achieved in other countries.

Good neighborliness between states develops primarily due to cooperation between them, relations are acts of cooperation necessary for all states. The task of cooperation between states is formed by the potential that each country has in relation to its population, either in the culture of acceptance of other people of different nationalities, or even in the obstacles created by the host society. Different countries interact with their constitutions, the planning of which creates mechanisms that enable states to introduce into their legal norms, the qualities of remaining independent, but at the same time guarantee the responsibility of interacting with other countries to cooperate with each other to find urgent solutions to solve problems, which mainly affect the humanitarian problems of their population.

At the level of bilateral relations, cooperation between states is concluded through numerous treaties, agreements or conventions. Cooperation also means collaboration. Thus, of all the bilateral treaties concluded so far between Romania and other states, half of them are referred to as cooperation treaties and the others as collaboration treaties.

The obligation of tolerance between neighboring states and mutual respect is „particularly derived from the way good neighborliness is governed. This presupposes an attitude of goodwill and concern for the

needs of the neighboring state or its population. It must persist and be based on mutual respect of states for each other's culture, history and traditions. Good neighborliness implies actions on the part of neighboring states that guarantee the normal development of relations between those countries and the development of cooperation and friendship between neighboring countries" (the idea of cooperation of states is also present in the Final Act of the Conference on Security and Cooperation in Europe).

3. Areas of application of the principle of good neighborliness in international relations

Good neighborly relations between states are achieved in a number of specific areas through legal acts concluded between them at bilateral or multilateral level, thus regulating internationally established social relations, which are based on cooperation, tolerance, mutual aid and respect for another nation. The areas of application of good neighborliness between states are different, ranging from the conclusion of good neighborliness treaties to cultural exchanges, economic cooperation and the fight against crime. The classification of areas is based on the content of the legal acts setting out the principle of good neighborliness. As a fundamental principle of the law of peace - good neighborliness requires refraining from committing any acts and actions of a negative nature in relations between the countries concerned.

Of major importance in international relations and in good neighborly relations are the treaties that set out the fundamental elements and relations between countries: „A treaty is a legal act concluded in writing which expresses the agreement of will between two or more states or international organizations and which includes rights and obligations of both parties" (Coman et al., 2019, p. 158). The earliest reference to neighborliness in Romanian law dates back to 1655, being the Treaty between Wallachia and Transylvania which laid the foundations of good neighborliness and respect for law between neighbors. The concept and idea of good neighborliness is expressly stated in almost all treaties concluded between neighboring countries. Good neighborliness is associated with the notion of friendship, understanding and collaboration. Such a treaty was signed between Romania and the Republic of Hungary in Timisoara on 16 September 1996, which states that respect, cooperation and good neighborliness between the two countries correspond to the fundamental interests of Romania and Hungary.

At the political level, the Contracting Parties must act with the aim of meeting European peace and security to reduce armed forces and refrain

from the threat or use of force. The practice of international treaties is as old as the existence of state communities, since ancient times agreements and understandings were concluded. This principle of observance of international treaties has emerged since those times. As international society has grown and diversified and relations between states have deepened, treaties have gained in importance, regulating virtually all areas of cooperation between states, regardless of their differences and social structure. Over time, the technique of treaties has been perfected and the role of lawyers has become increasingly important. From the simple treaties of peace and alliance known from earlier times, it has expanded to a very wide range of agreements that states are perfecting in different fields. Treaties have become very varied, from solemn treaties, sacramental formulas to agreements in simplified form, allowing the expression of the consent of the parties trough a simple signature of the negotiator. Any treaty concluded by the Romanian state requires certain specific stages and procedures applicable at international level, after which the Romanian state must take measures to implement this treaty by its own legislative, executive and judicial bodies. International cooperation can also be found not only in the form of a treaty.

Diplomatic and consular field. Maintaining relations based on good neighborliness between states is achieved by establishing diplomatic and consular relations between them, this being the first step that states take in establishing cooperative relations.

"Diplomacy as an activity relating to relations between states is carried out through the use of such means as permanent representation of states, diplomatic correspondence, the conduct of attempts, participation in international conferences. The establishment of a diplomatic mission on the territory of another state presupposes as a prerequisite, the existence of diplomatic relations between the 2 states" (Moldovan, 2018, p. 228). The establishment of such a mission also requires the consent of the receiving state - an agreement between the two states. The function of the diplomatic mission of the states is to develop relations with the receiving state, the embassy makes proposals for this purpose and according to the instructions received, acts for the development of relations in all economic, cultural and last but not least political fields.

„Consular relations are relations established between states in the exercise of consular functions by their bodies. As a rule, states establish diplomatic relations and have consular relations, because diplomatic relations require a minimum of relations that also make the exercise of consular functions necessary. In addition to the fact that consulates develop

friendly relations between the two states, they develop trade and economic relations between the states in question and involve information, reporting, monitoring the implementation of bilateral agreements, proposals and representing the citizens of the state" (Moldovan, 2019, p. 198).

In both the diplomatic and consular fields, good neighborliness as a principle of international law plays an important role, because the whole range of relations between states must be based on friendly and respectful relations, but good neighborliness encompasses these duties in its meaning. Romania carries out a wide range of activities with neighboring countries and not only in the diplomatic and consular field, establishing peaceful relations, cooperation and mutual understanding with them.

4. Conclusions

Every state has a territory over which it exercises full sovereignty. No state can exercise sovereignty over the territory of another state, only through international agreements is access to another territory allowed with rights, often reciprocally. Neighborliness means various forms of cooperation between neighboring countries in their border areas and their regulatory principles and the disagreements that may arise. Neighborliness is closely linked to border areas, and it is obvious that a state cannot be conceived without territory and borders. The concept of neighborliness is the political and legal relations between states, their organization and cooperation. The principle of good neighborliness is an instrument that is continuously developed through rules to promote peace and international relations, which embodies the obligation and development of peaceful relations in the structure of all areas. Good neighborliness has manifested itself in relations between states and has gradually become a genuine principle of international law. The generally applicable legal concept of the principle of good-neighborliness is the social relations which may arise between states and which govern the conduct of the subjects of international law. For the system of international relations between states with the principle of good neighborliness, it is emphasized in the specific relationship of the moment of accomplishing of international interstate relations, and these relations are the matters, in most cases in acts with legal value.

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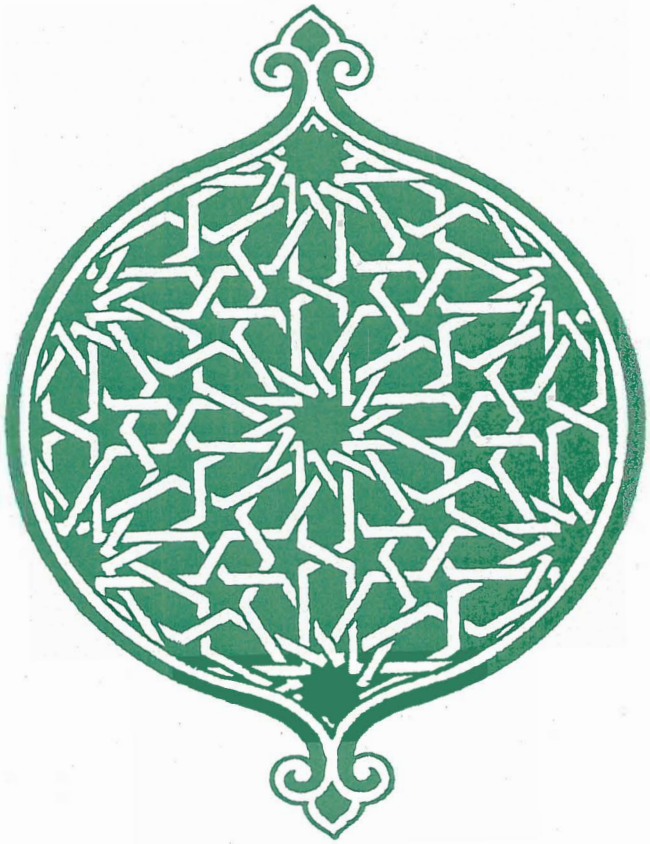
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SECTION THREE

Protection of Man and the Environment from the Harmful Impacts of Products and Processes Generated by Man

If Islam is thus vigorous in its protection of the basic elements of the environment for the benefit of present and future generations, it is equally earnest in the protection of man and the environment from the harmful impacts of external factors such as chemical products and wastes. Damage of all forms and kinds is forbidden in Islam. One of the fundamental principles of Islamic law is the Prophetic declaration, "There shall be no damage and no infliction of damage."[1] Prevention of damage and corruption before it occurs is better than treatment after it occurs. Another of the most important juristic rules is, "The averting of harm takes precedence over the acquisition of benefits." Accordingly, all activities which aim at achieving good and securing benefits by way of satisfying human needs, providing services and developing agriculture, industry, and means of communication, should be carried out without causing significant damage, injury, or corruption. It is therefore imperative that precautions be taken in the processes of envisaging, planning and implementing such activities so that, as far as possible, they may not be accompanied by or result in any form of damage or corruption.

1. Wastes, Exhausts, Cleansing Materials, and Other Toxic and Harmful Substances

Wastes and exhausts, resulting from man's daily and ordinary activities or from industrial activities and uses of modern and advanced technology, should be carefully disposed of or eliminated, in order to protect the environment against corruption and distortion and to protect man from the effects of these harmful impacts on the environment, its beauty and vitality, and to ensure the protection of other environmental parameters. The accumulation of waste is largely a result of our wastefulness; whereas Islam's prohibition of wastefulness requires the re-use of goods and recycling of materials and waste products in so far as is possible, instead of their disposal as trash.

The Prophet, upon him be blessings and peace, forbade that a person relieve himself in a water source or on a path, or in a place of shade, or in the burrow of a living creature.[2] The values underlying these prohibitions should be understood as applicable to the pollution of critical resources and habitats in general. Wastes, exhausts, and similar

pollutants should be treated at their sources, with the best feasible means of treatment, taking care in their disposal to avoid adverse side effects that lead to similar or greater damage or injury. The juristic principle in this connection is "Damage shall not be eliminated by means of similar or greater damage."

This is also true of the harmful effects of cleansing and other toxic or harmful materials used in homes, factories, farms, and other public or private premises. It is absolutely necessary to take all possible measures to avoid and prevent their harmful effects before they occur, and to eliminate or remove such effects if they do occur in order to protect man and his natural and social environment. Indeed, if the damage resulting from these materials proves greater than their benefits, they should be prohibited. In this case, we should look for effective and harmless or less harmful alternatives.

2. Pesticides

These same principles apply equally to all pesticides including insecticides and herbicides. The use of such materials should not lead to any harm or damage to man or the environment in the present or the future. Consequently, control and prohibition of whatever leads to harm or damage to people or to ecosystems is required, even though this control or prohibition may affect the interests of some individuals, in accordance with the principle that "A private injury is accepted to avert a general injury to the public." All legitimate and lawful means should be used to avoid and prevent damage or harm, provided that such means do not lead to or cause similar or greater damage. The juristic rule in this connection is "The lesser of two evils shall be chosen." If the use of such pesticides is unavoidable, then "Dire necessity renders prohibited things permissible." However, "Every necessity shall be assessed according to its value," and "That which is permitted on account of an excuse ceases to be permissible with the cessation of that excuse."

The most selective and least destructive means of pest control are required by these values and principles of Islam. Preventive measures, biological controls, non-poisonous repellents, biodegradeable substances, and narrow-spectrum pesticides should be favored whenever possible over their more destructive alternatives, and their application should be carefully calculated to protect man, his crops, and livestock with utmost efficiency and effectiveness, and with minimum overall injury to God's creation.

3. Radioactive Substances

The principles mentioned above apply as well to radioactive substances which not only are extremely toxic, but also remain so over extremely long periods of time. We should prevent and avoid the harmful effects of their use on people and ecosystems. It is also

imperative that we satisfactorily dispose of all radioactive wastes. Special precautions are required to prevent the discharge of such wastes from nuclear facilities, whether due to carelessness or malfunction, and to avoid all harmful effects from the testing of nuclear explosives.

4. Noise

Since industries, mass communication, and transport tend to be accompanied by and associated with noise, it is necessary to look for all possible ways and means of avoiding and minimizing this noise. Noise has a harmful impact on man and the living elements of the environment — hence the necessity of reducing and preventing this harm as far as possible and by every means, according to the rules and injunctions of Islamic law.

5. Intoxicants and Other Drugs

It is clear that intoxicants and narcotics have a harmful effect on man's physical and mental health and, as a consequence, on his life and his reason, offspring, work, properties, honor, and righteousness. It has been proven without doubt that intoxicants and other drugs cause considerable physical, social, and psychological disorders. Therefore, all kinds of intoxicants and mind-affecting drugs have been prohibited in Islam. Their production and marketing is forbidden as is that of anything that is associated with them or assists in their production. This shows the concern of Islamic legislation over fourteen centuries for the protection of man and the conservation of his social and physical environment against all forms and kinds of corruption, harm, damage and pollution.

6. Natural Catastrophes

All necessary precautions should be taken to minimize the effects of catastrophes which befall man and the environment, such as floods, earthquakes, volcanic eruptions, storms, natural conflagrations, desertification, infestations, and epidemics. It must be recognized that natural disasters are often caused in part by acts of man, and that their consequences by way of loss of life and property are in many cases aggravated by inappropriate settlement, building, and land use practices. Accordingly, their impacts can be largely mitigated by planning with foresight, based on understanding of natural processes. Unsuitable land use practices and activities should not be permitted in areas inherently or potentially hazardous to human life and health or areas vulnerable to disruption of natural processes.

Protection of man and man's properties and interests is essential and necessary and "Whatever is indispensable to fulfill an imperative obligation is itself obligatory."

Islamic law maintains that "Damage shall be eliminated," and "Damage shall be removed to the extent that is possible." However, the protective measures that are taken should not lead to other adverse impacts in accordance with the principle that "Damage shall not be eliminated by means of similar damage."

Annex 549

C.G. Weeramantry, "Universalising International Law" (Martinus Nijhoff Publishers, 2004), pages 1-31

Universalising International Law

C.G. Weeramantry

Martinus Nijhoff Publishers

C.G. WEERAMANTRY

Universalising International Law

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Preface

Universalising international law is one of the most urgent tasks awaiting those who wish to advance the discipline. Though all the world acknowledges its universal nature, it has long been confined in a largely monocultural mould. Indeed a tendency is sometimes discernible for international law to be compartmentalised and to function within a close cabinet of technical rules little known to those outside the ranks of specialists. The public at all levels tends to lose interest, viewing it as an ineffective discipline and as one to be left to the lawyers and the diplomats. It seems essential, therefore, that its value, effectiveness and relevance must be brought home to the general public.

It urgently needs to be universalised in regard to its constituency, for it needs the active support of a far wider group than its immediate votaries. It requires a vision that takes in the vast panorama of global cultures, as a source of enrichment of its principal concepts and underlying philosophies. It needs to take in the wisdom of the past and attune itself to the problems of the future. It needs also to cross the barriers that separate academic disciplines, for the insights of sociology, history, philosophy, psychology, linguistics, economics and the physical sciences have much to offer it.

The task of universalisation is not easily discharged for it has many facets and has been much neglected. Efforts in this direction are slowly gathering momentum and the present volume is designed as a modest contribution to this end.

Another form of isolationism that affects international law is that domestic and international lawyers tend too often to work in isolation from each other. There needs to be more cross-fertilisation between these two important areas of legal activity.

It is hoped that domestic lawyers, writing in such fields as equity, the judicial function, the law relating to obligations, environmental law, and other areas which have their counterparts in international law, will continue to interest themselves in the literature of international law. This will have the dual advantage of offering domestic lawyers new insights for the development of their legal systems, and of giving international lawyers the benefit of the practical perspectives gathered from applying the law to the myriad factual situations encountered in day-to-day litigation.

If international law is to be made more meaningful and if the world is to live under the international rule of law, rather than under economic, military, ideological or other forms of domination, this is a task demanding attention. If international law can thus be universalised in space and time and across the disciplines, its message will spread through all ranks and sections of the global

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community, thus greatly enhancing its power. The new world order of the future depends heavily on increasing the reach and acceptability of international law.

Universalism will help also to anchor international law to the philosophical and ethical principles from which it sprang, and will free it from the incrustations of legalism and formalism which sometimes grow around it.

This volume looks initially at some general aspects of universalisation (Part A). Thereafter it adopts a universalist approach to some of the sources of international law (Part B). Part C deals with peace, the bedrock of international law, which likewise requires a universalist approach.

Indeed some of the essays in this part travel further afield than is traditional in international law studies, but, in view of the prime importance and urgency of the topic, such a many-faceted approach is essential.

Part D examines the development of some particularly important areas of international law.

This volume consists mainly of a collection of lectures delivered over the years to various audiences on themes relevant to the topic of universalism. Extracts from some judicial opinions are also included in this volume, as illustrations of the universalist approach which can be adopted judicially as well, to the problems confronting international law.

It is hoped that these studies will highlight the imperative need that now exists for extending the conceptual framework of international law, thereby buttressing its moral authority and widening its appeal at a time when universal acceptance of international law is one of the most pressing demands of the international system.

I wish to thank my wife for her patience and understanding during the arduous process of assembling this book, my secretary Sujatha Bulathsinhala and Anuruddha Perera, Sumangalie Atulugama, Sherine Daberera, Yuresha Fernando, Anoushka Goonewardena, Himalee Kularatne, Sonali Silva and Dilushi Wickremasinghe of the Weeramantry International Centre for Peace Education and Research for the help they rendered in numerous ways in finalising this manuscript for publication.

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PART A

GENERAL PERSPECTIVES

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Introduction to Part A

The universalisation of international law requires attention at several levels. Within the discipline itself perspectives need to be widened, so as to take in the full range of global traditions as sources of inspiration. It is against this composite network of world-wide experience and wisdom that its concepts need to be re-examined with regard to their adequacy for the vastly changed milieu in which they will need to function. This is essential to win for it the willing acceptance and allegiance of the vastly extended community of nations which now exists, as compared to the era in which the discipline first emerged. As in the field of concepts, so also in the field of procedure, world-wide tradition and experience need to be called in aid.

International law needs also to draw more freely upon the knowledge and insights of all disciplines, some of which, such as psychology, sociology, linguistics and comparative religion, despite their deep relevance to the understanding of international law, have tended to be neglected.

Within the ranks of international lawyers new visions need to be stimulated to meet the challenges of the new century, many of which are without precedent in the millennia of human history. Likewise the profession of international lawyers needs to overcome its traditional exclusiveness and develop more interaction both with other members of the legal profession and the general public.

Within the ranks of its constituency, the global public whose service is its primary objective, there needs to be an increase of awareness of its efficacy and its potential for practical service not only at high governmental levels but also at the level of service to the individual citizen.

Finally, international law needs to take note of the major institutional factors that shape the course of global affairs, commencing with the dominant concept of sovereignty and ranging all the way to the forces of globalism which, though lacking an official status, nevertheless wield as much influence as the sovereign state has wielded in the past.

The discussions in this Part deal with some of these considerations.

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Chapter 1

Cultural and Ideological Pluralism in Public International Law*

I. Introduction

An important aspect of universalisation in the field of international law is the quest for universally acceptable principles and standards, which can provide a solid foundation for the discipline of international law. This is particularly important because in international law more than practically any other department of law one may choose to name, universality of appeal, acceptance and allegiance are prerequisites to the effectiveness of the system. It needs to transcend all the barriers imposed by race, nationality, culture, religion, wealth, power, privilege and position, for it has one world for its province and all humanity for its clientele.

In the sphere of knowledge likewise it must cross the boundaries which have traditionally hemmed in the different departments of the human intellect. Considerations of law, history, economics, sociology, linguistics, philosophy, ethics, religion, tradition and morality overlap, intertwine and interact with insights derived from psychology, physics, chemistry, medical science, biology, information technology, climatology, geology and environmental science with a closeness and immediacy rarely seen in other disciplines.

This kaleidoscope of interacting factors has tended in the past to receive less than its due share of attention and it can only be neglected in the future at the cost of the integrity and comprehensiveness of the discipline of international law. The task is difficult but by its very nature international law cannot afford to be compartmentalised. Its interface areas with every field of human activity require these many insights to inspire and fertilise it in its mission as the principal discipline

* Based on the author's essay in *Liber Amicorum Judge Shigeru Oda*, ed. Ando *et al* 2002, Vol.2 p.1491.

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entrusted with the worldwide preservation of law and order. If a strong multicultural and interdisciplinary effort needs to be mounted for this purpose, there must be a concerted effort to provide it so long as global peace and harmony remain the lodestar of the discipline.

Though on a lesser scale, a similar commingling of diverse influences provided the backdrop to the emergence of the Universal Declaration of Human Rights, which, despite all predictions to the contrary, was able to evolve out of a medley of diverse traditions and attitudes and to prove that the global community could agree on certain fundamentals as commanding acceptance across all barriers of creed and colour and historical tradition. So it is with international law, except that the task here is even more complex because we are not merely searching for a set of irreducible minimum standards but seeking to maximize its potential as an active means of fulfilling global aspirations for a peaceful world order.

International law has always been aspirational in the special sense that it has sought to transcend even such powerful considerations as national self-interest and to reach beyond them to the welfare of humanity as a whole and the higher ethical codes, which command universal acceptance. Operating as it necessarily must within the tangled thickets of competing national interests and the harsh world of realpolitik, it has the difficult task of steering a moral course through this accumulated undergrowth of centuries. It has a special mission in that it bears the responsibility not merely for global law and order but for the very survival of humanity. If it fails we may well be reduced to contemplating the fading embers of dying civilizations rather than the promise of a brand new world of unsurpassed achievement.

Such is the special mission and responsibility of this discipline, which must thus remain anchored at all time to universally accepted ethical principles. It cannot afford to descend to a narrow monocultural approach, which may deprive it of that universality of support, which is essential to its work and authority.

Just as the Universal Declaration confounded social scientists who argued with the deepest sense of conviction that it would be impossible to achieve a universally agreed document, so also the widespread cultural differences of the world will not prevent a progressive widening of the area of universal agreement on which international law is based. True, that document did not adequately reflect certain values on which universal agreement was possible – such as human *duties*, and economic, cultural and social rights. But the world has since moved far towards the acceptance of these concepts. The Universal Declaration was only a beginning. So also, what we have thus far achieved in international law must be regarded as but the beginning of a long road towards the shining goal of international peace and harmony.

When international law commenced its modern career in the 16th and 17th centuries, it was cast largely in a Graeco-Judaeo-Christian mould. Since then it has moved towards greater universalization. Many more universal perspectives drawn

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from all the world's cultural traditions can and must be fed into it as it develops to suit the needs of the 21st century. Its success in that century will depend heavily on the extent to which it can be further universalized by harnessing the strengths available in the world's rich inheritance of cultural and ideological traditions.

International law cannot afford to remain set in a narrowly monocultural mould and hope in that form to address problems which are truly global, multicultural and multi-traditional, which cry out for a universal solution.

Another factor that emphasizes the importance of universalism in international law is its lack of enforcement mechanisms. Lacking sheriff or constable or soldier to enforce it, international law needs to rely upon its own moral strength and universality for it to command acceptance on a worldwide basis and to marshal the strength to prevail over the physical might of states. It must therefore be a set of concepts as universally supported and as deeply rooted in worldwide tradition as research can reveal. Shut out such universality and one cuts off the tap roots from which it derives its nourishment. Little wonder then that it will be weak in the allegiance it commands. There is an imperative need therefore for widening the intercultural base on which the structure of international law stands.

International law at the time of its evolution in the seventeenth century served the interests of a small group of European states. Right through to the end of the nineteenth century it served the interests of that restricted group. Since the system it now administers is universal, the forces of philosophy and idealism out of which it was born must now be considered in their universalistic context rather than in the monocultural context prevailing in the seventeenth century. The task lies upon scholars of garnering together in a common storehouse the wisdom to be drawn from the entire human experience.

This is a factor considerably reinforcing the need to search globally for the traditions embodying the wisdom of the whole of humanity rather than to confine this search within the limits of any one cultural tradition however rich. "One of the great tasks, perhaps the greatest task, weighing on modern international lawyers is to craft a universal law and legal process capable of ordering relations among diverse people with differing religions, histories, cultures, law and languages."[1]

When Article 9 of the Statute of the International Court of Justice required that the body of Judges as a whole should assure the representation of "the main forms of civilization and the principal legal systems of the world" there was a clear expectation that the insights from all these systems would be fed into the developing body of international law. That has not happened thus far in any significant measure, and such input, if any, has been minuscule. Hence the need for the further studies envisioned in this volume.

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[1] Mark W. Janis and Carolyne Evans, *Religion and International Law*, Martinus Nijhoff Publishers, 1999, p. xi.

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II. Phases in the Interrelationship between International Law and Philosophy

For the purpose of this discussion, and at the risk of over-simplification, it is useful to view our topic against five phases in the evolution and development of international law.

The first phase was mainly philosophical. In particular the natural law philosophy prevalent at the time of its modern formulation in the 16th and 17th centuries, was a primary stimulus that triggered off the emergence of the new discipline, amidst the collapse of the centuries-old authority of the Church and the Holy Roman Empire, and the emergence of a series of new nation states not subject to any overarching moral framework or authority. Grotius and the other founding fathers were philosophers attempting to translate their philosophical ideas into norms of morally acceptable conduct for states. They did what they could within the limited framework of the learning available to them to search for their sources of inspiration from knowledge ancient and modern, religious and secular. It was that philosophical inspiration which provided the general contours of international law and the framework for its emergence as a new discipline.

A second phase through which international law passed was the phase in which it came to be structured as a framework for the enterprise of territorial expansion and colonialism. This was sought to be accommodated within the basic moral framework within which it was conceived, but a number of self-serving rules suitable to a club of expansionist nations came to be incorporated within it. International law as thus adapted from its original natural law contours served well the needs of world empires. It allowed for the acquisition under law of territories that had for centuries been under indigenous occupation and rule. It was able to cast a cloak of legality over the subjugation of conquered peoples, the appropriation of their wealth, the expropriation of their territories and even such practices as the slave trade. These were concepts which would have been anathema to the moral framework within which the discipline was conceived, but for a variety of reasons the moral contradictions received scant attention.

International law in this second phase continued for some centuries till the age of traditional empires came to an end.

There then commenced a third phase in which a large number of new members of the family of nations emerged from the state of non recognition to which international law had consigned them for centuries and began to claim equality of rights with all the prior members of the international club that had dominated the world, in the imperial era.

It became necessary in this context to rethink many of the self-serving rules to which international law had given its sanction in the past, and to construct an ostensibly universalist body of norms. Theoretically at any rate it was necessary

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to jettison concepts of privilege, which the traditional members of the club had claimed for themselves in the past.

This trend commenced after World War I but really moved into full swing after World War II, for the spirit of empire was still alive and well even after World War I. International law thus entered what may be described as a third phase.

However, there was a pronounced limiting factor retarding the move towards universalism. The momentum towards full equality of the new members of the world community of states was impeded and overshadowed by the ideological confrontation that now emerged between capitalism and communism. These two ideologies tended to block out a vision of the numerous other traditions and ideologies which should in this new phase have made their impact upon the world of international law. In the world of realpolitik the influence wielded by these two ideologies was out of all proportion to the share of these ideologies in the totality of the world's ideological and cultural inheritance. That share was minuscule but these ideologies bestrode the world stage like competing colossi. The obvious historical opportunity for other world cultures to make their impact on the content of international law was thus lost through the dominance of the two rival philosophies which overshadowed all else.

We have now entered a fourth phase, with the cessation of the Cold War. We are not in a stage now of confrontation between two powerful ideologies nor are we dominated by their ideological conflict. One would think therefore that the time has at last emerged for all the rich cultural traditions of the world to make their impact upon the body of international law. However, the voice of these other cultural traditions is muted and the stage has been taken over by the capitalist ideology, which tends to dominate all departments of state activity in both theory and practice. It tends to assess all institutions, customs and values by the yardstick of profits and profitability, without which their worth tends to be denied and they face oblivion. Its mercantile ethic is fast tending to become the measure of all things and has been freed of the powerful challenge it faced during the Cold War. In a needy world it tends to drown out other perceptions, standards and values.

The rich cultural inheritances which can contribute so many perspectives, values and norms to international law continue to remain largely untapped as they have been for the past four centuries. It is time the scholars of the world started delving into the rich veins of untapped experience and wisdom contained in these mines of tradition.

The fifth phase, yet before us, will be the phase beyond globalisation. The inadequacies of globalisation, the paucity of its philosophical base, the inability of earth resources to sustain its requisite of continuous expansion, its monolithic nature and the tendency it breeds of accentuating economic divisions both domestically and globally will all combine to force upon the scholarly community a consideration of alternatives and out of this will emerge a new realization of the

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importance of making international law a truly multicultural system drawing on the richness of the universal cultural inheritance. That phase may be closer than we tend to think, and with it will come a blossoming of international law to reflect its multicultural background. The present author sees signs of this around, especially in the reawakened vigour of the scholarship of the developing world.

This phase is especially interesting and challenging because the revolutionary force that will bring about this fundamental change will come not from armed might or economic force but from the world of scholarship. It is scholars alone who will be able to illuminate the principles which lie at the foundation of international law and show how universal they are. It is scholars alone who can stimulate a wider popular perception of these truths.

The responsibility lying upon the world of scholarship is therefore enormous. The challenge has not been taken up in many quarters but there are hopeful signs of that stirring of scholarly interest which will be the precursor of change. If the world of scholarship does not take up this challenge the adverse consequences to the prestige and authority of international law could well be momentous.

1. The First Phase

Natural law has performed a number of functions in the course of its voyage down the centuries. They ranged from building the Roman Civil Law into a cosmopolitan system to enabling the American judges to interpret the constitution. Not the least of its many achievements has been the role it played in the evolution of international law by giving it a transcendental perspective reaching beyond the particular rules and self interests of individual states.

In the expressive words of Julius Stone natural law was "the vessel in which various criteria of justice sailed on to western horizons."[2] Modern international law was one of the principal destinations to which the vessel sailed and to which it delivered its goods.

The cargo came from many sources. There was from classical Greece the Aristotelian idea that "if the written law tells against our case, clearly we must appeal to the universal law and insist on its greater equity and justice."[3] That Aristotelian cargo, incidentally, was not picked up directly from Greece but from Arab ports of call whither it had found its way through the work of Islamic philosophers such as Avicenna (Ibn Sina, b.980 AD.) and Averroes (Ibn Rushid 1126-1198 A.D.)

From ancient Rome came Cicero's classic description which no doubt exercised a profound influence on the minds of the founding fathers: "There is in fact a true law, namely right reason, which is in accordance with nature, applies to all

2 See Julius Stone, *Human Law and Human Justice,* Stanford, 1965, p. 36

3 *Rhetorics* I, 15.

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men and is unchangeable and eternal ... It will not lay down one rule at Rome and another at Athens, nor will it be one rule today and another tomorrow. But there will be one law eternal and unchangeable binding at all times and upon all peoples."[4]

The horizontal spread of this universalism was complemented by the vertical penetration from the highest levels down to all subject classes through the Judaeo-Christian idea[5] of a law coming directly down to every layer of society from God himself.

This idea was further elaborated by St.Augustine 354-430 AD who arranged law in three tiers, *lex temporalis, lex naturalis*, and *lex aeterna*. Natural law thus obtained a position well above enacted or state law and somewhere close to the eternal law, which is the reason or will of God. The element of reason received further emphasis from Thomas Aquinas. Eternal law was the incorporation of divine wisdom and natural law that part of it which revealed itself in natural reason. All positive law enacted by human authority must keep within the divine limits.[6]

Nor must we lose sight of the effect of Islam's philosophical thought upon the work of Aquinas and the Christian scholars of his age. Scholars such as Averroes and Avicenna in their work on the doctrine of double truth grappled with the problem of the place of human reason in the context of divine revelation – a problem faced by Islam and Christianity alike. They worked out a rapprochement between these two sources of knowledge and gave a liberal place to human reason, which was thus freed of the shackles which in the past had confined it within the rigid framework of divine revelation. The freedom of inquiry thus achieved passed on to the Christian world in one of the most interesting intellectual movements of history and stimulated the work of scholars such as Aquinas, thus giving freer rein to human inquiry than it had enjoyed in the past.

These were some of the ideas which in the hands of Grotius and others provided the driving philosophical force behind the evolution of international law. The idea of an overarching law based upon higher principles standing above the specific laws of specific states dominated this first phase in the history of international law. This system was conceived as standing above the mundane economic, political and military considerations which shape the conduct of states.

There were thus many builders of the edifice of the natural law, which Grotius took over as the foundation of his new system.

Grotius selected from all these ideas those which could best build a bridge between the medieval world and the modern secular world. From the philosophies of the past a structure was erected under which states were to conduct their affairs

4 *De Republica* III, 22.

5 Stone, *op.cit.* p. 43.

6 *ibid.* p. 44.

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with due regard to universally accepted standards of morality and reason. The whole edifice rested upon the bedrock of philosophy and idealism.

2. The Second Phase

The second phase based itself on the proposition that it was not possible to work out a universal system in the sense that it represented a universal set of norms and aspirations. Rather in the manner in which Chinese and Roman civilizations saw themselves as the cultured section of the world population and all the others as being in an outside realm "without the law" or, more crudely, as "barbarians", so also the international law of this era gave up any attempt to find a system based upon universal sentiments.

An often quoted passage from Henry Wheaton reads as follows "Is there a uniform law of nations? There certainly is not the same one for all the nations and states of the world. The public law, with slight exceptions, has always been, and still is, limited to the civilized and Christian people of Europe or to those of European origin".[7] There is a subtle hint here of a world divided into two groups of "civilised" and "uncivilised" nations, which is also echoed unfortunately in Art.38(1)(c) of the Statute of the International Court of Justice which speaks of the principles "recognised by civilised nations".

Wheaton's view, expressed as late as 1866, represented the accepted thinking of public international lawyers of his time and this, it must be remembered, was a period of critical importance in shaping the contours of the international system the world inherited in the 20th century. It shows how long the intellectual framework lingered which had made possible the division of the world into two groups and which by casting one group into a state of righteousness, had made colonialism possible.

There could not therefore be a universal natural law of overarching authority but an imposed law, which governed "civilized" and "uncivilized" people alike, not because it was accepted by the latter but because those who thought they were in the former group considered it essential for all, especially as in their uninformed view the latter had none.

Statements such as Wheaton's tend in one form or another to be re-echoed even in modern writings. This is a strongly alienating factor taking away from the discipline of international law that unqualified universality of allegiance which it should command if it is to be an effective system in the 21st century. Such statements ignore the richness of traditional legal systems in regard to principles which can play a great role in enriching the international law of the future. A developing field such as international environmental law offers rich examples of this. Modern international law needs to acknowledge the wide range of world cultural traditions

7 See Henry Wheaton, *Elements of International Law,* George Grafton Wilson ed., the Carnegie Institute of Washington, 1866, rpt. 1964, p.15.

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which, in the field of environmental law have shown much more understanding of the environment than modern western law.[8]

The international legal thinking of this era exhibited many shortcomings. Among these were:

(a) Excessive reliance on a positivistic as opposed to a natural law approach
(b) Unawareness of other cultures
(c) The sacrosanct status accorded to state sovereignty
(d) Failure to appreciate the large number of basic international law principles on which there would be common agreement across the cultures
(e) Insensitivity to the rights of non-Western peoples
(f) Imposition upon other cultures of concepts and procedures of western law

Much could be written on each of these, but considerations of space prevent this.

3. Third Phase

As already observed, during the Cold War two ideologies each aiming at world domination commanded an influence out of all proportion to the share of these ideologies in the totality of the world's ideological and cultural inheritance. The gentler ideologies – the pacifist love-thy-neighbour ideology of Christianity, the Buddhist ideologies of compassion for all beings, the Islamic ideology that all humans are as equal as the teeth of a comb irrespective of colour, race, caste or creed, the warm and sharing fellowship of the Pacific, the African ideology that the human family consists not only of those existing in the here and now but also those who went before us and those who are yet to come – all these and many more were submerged in the political reality that power rested with the two ideologies first mentioned. In the result the potentially rich contribution of these other ideologies to international law tended to be overshadowed and inhibited. The dampening effect of this ideological confrontation on the contribution of the traditional ideologies to international law was significant.

The dominance of those two ideologies meant also a preoccupation with military considerations owing to the resultant power struggle. This obstructed the progress of public international law in the directions most needed for the betterment of humanity. The advancement of areas such as peace, the common heritage of mankind, the protection of the environment and the development of social, economic and cultural rights was retarded. This was especially so in view of the negative impact of arms expenditure upon the expenditure of resources in pursuit of

8 On this aspect see the author's Separate Opinion in *Case Concerning The Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, I.C.J. Reports, 1997, p. 7.

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higher values such as education, culture, human rights and development. Development and all the human rights connected with it depend heavily on the international financial system. With that system heavily geared towards armaments, the material resources and human effort needed for the provision of basic human rights were diverted (as indeed they still are) to the tune of over a billion dollars a day. This wasteful channelling of resources tended to be taken as a fixed and immutable feature of the international landscape, thus diverting attention from the fundamental need to mould the principles of the international rule of law into an affirmative instrument for global peace.

The ideologies of free enterprise placed the manufacture of weapons within the hands of private enterprise and indeed gave them a stake in international unrest and tension. The armaments industry was thus a factor constantly militating against global peace and exercising a strong inhibiting influence over the processes of tension resolution. The power of the military-industrial-bureaucratic complex over politicians and policies kept growing through the era of the cold war, with a vastly negative impact on the issues that were really important for the betterment of the human condition. A reflection of the effect of these attitudes on the world of international law is the fact that to this day a blind spot exists in international law and human rights in regard to the armaments trade, which flourishes despite its violation of every known canon of human rights.[9] An even more extreme example is the global trade in instruments of torture by 150 firms which, according to a recent report of Amnesty International released in March 2001, are openly marketed by firms throughout the world and have become a global business.

In the socialist system likewise, increasing millitarisation meant that so much the less resources were available for development. While it was true that private profit from the manufacture of weapons was not possible, military needs often took precedence over urgent requirements in such fields as health, education and overseas aid. Those areas of international law, which relate to development, thus received less attention than they would otherwise have attracted and it was inevitable that the universalist norms that should have been building up in this department of international law were compelled to yield, in case of conflict, to the exigencies of the power confrontation.

Apart from the military confrontation there was a struggle between both systems to win the allegiance of various countries. Much of the world came under the protective umbrella of one or other of the two ideologies and those who received these benefits had naturally to lend their support to these ideologies even at the cost of their traditional value systems and cultural traditions. With the newly emergent countries thus drawn into one camp or the other, there was little oppor-

9 See C.G.Weeramantry *Justice Without Frontiers*: Vol. I, Ch 11 and Vol.II, Ch. 11.

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tunity for them to make a real cross-cultural input into the content of international law. Just as powerful pressures often impaired their independence, so also these pressures muted the forces of cultural independence which might otherwise have been more productive.

Economic development and respect for human rights are combined together in Article 55 of the Charter of the UN as necessary for peaceful and friendly relations among nations. Economic development and human rights are thus interlinked and interdependent and they are both firmly wedded to the notion of peace. They were both special victims of the superpower confrontation.

This conflict of two powerful ideologies was however not without its affirmative legal effects, for the interaction of each ideological tradition upon the other produced a composite result which took us further than either ideology on its own could have achieved. The ideology of the welfare state was probably one such result. Each competing world view achieved certain modifications in its doctrines and applications as far as could be accommodated without compromising its basic philosophical tenets. This mutual leavening influence was largely lost upon the termination of the Cold War.

Also, despite the restraining factors of two preponderant ideological systems, the new membership of the family of nations was able to introduce certain basic new concepts into international law, which may not have received such recognition, but for their influence. This is an important index to the full contribution they could make if international law were freed of the inhibitions referred to.

One of these areas in which the ideologies of the newly emergent nations made an important impact was in regard to the elevation of social, economic and cultural rights. Ideologies based upon the right of the individual against the State had tended to concentrate upon the civil and political rights of the individual. This was indeed the almost exclusive concentration of Western oriented systems until after World War II. The view that human rights reach into the social, economic and cultural areas at least as intensely as in the civil and political areas, was widely shared by the ideologies of many of the newly emergent nations. It is true socialist thinking played a very significant role in achieving a realization of the essentiality of these rights, but yet it needed the multicultural input of many newly independent states to achieve this breakthrough. The Covenants on Economic, Social and Cultural Rights and on Civil and Political Rights, both passed in 1966, embodied perhaps for the first time an international acceptance of their co-equal nature. Indeed the interval of 18 years between the Universal Declaration and these twin Covenants was an index to the difficulties encountered in bringing about a recognition of these rights.

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4. Fourth Phase

With the end of the Cold War the power confrontation eased, to leave only one super power in a situation of dominance in world affairs. The monopolistic power situation was matched by a monopolistic ideological situation for, with the demise of the Soviet Union, the philosophy of the open market place did not any longer need to compete with the philosophy of socialism for world dominance. It enjoyed a free run and with this came a trend towards globalisation in all departments of activity. The free trade principle began to take over in areas into which it might not otherwise have had entry. In association with global financial institutions it began to enter even such areas as education, health care and public utility services. The World Bank, the International Monetary Fund, the Asian Development Bank and the very powerful World Trade Organization began to lay down principles by which various countries were required to direct their governmental and economic activity, whatever their traditional philosophies might have indicated, in such fields as education and health care. Globalisation, driven by the economic imperative, submerged other inputs into international law.

To take one example, if principles of environmental protection required one form of action and principles of free trade required another, the balance tended to tilt in favour of the latter and this trend manifested itself even in some decisions of World Trade Organization tribunals. The dice came to be heavily weighted against all other principles and philosophies than that of free trade.[10]

However, this is only a passing phase, for globalisation has served the important purpose of forcing people all over the world to look inwards into their own cultures to see what they contain, which globalisation and the commercial ethic lying behind it lack. They also see globalisation as a form of continuance of foreign domination which officially ended with the dismantling of the colonial empires. For that very reason they tend to counterpoise the pristine value of their philosophical systems against the mercenary ethic of globalism, thereby highlighting the limitations of the latter..

Spurred on by such considerations scholars throughout the world, especially in the developing countries, are now searching afresh for the enduring bases of international law, which lie beyond the confines of any one culture or any one approach to global problems. We are today witnessing the emergence of this multicultural approach.

The potential of other cultures to reinforce the basic principles of public international law is enormous, as will be noted in the ensuing discussion.

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10 See John H. Jackson : *The Jurisprudence of GATT & The WTO,* 2000, see especially Ch.21, World trade rules and environmental policies: Congruence or Conflict? pp. 414-448.

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5. Fifth Phase

This is the phase that lies ahead, the commencement of which is long overdue and the flowering of which will give new life and vigour to international law. It is an area awaiting an input from cross-cultural and inter-disciplinary scholarship which, hopefully, will delve deep into these sources and uncover much international law-related material which has not hitherto been brought to the notice of the global international law community. In addition to specific principles, there will also be a revealing of philosophies and attitudes of entire cultures towards some of the fundamental postulates of the international legal system and a pointer to possible directions of development in the future.

I shall here address the potential of various cultures to contribute to the development of public international law, drawing attention to past contributions and to elements which can be of service in the future.

The different groups comprising the cultural inheritance of mankind have, in various ways, which are not sufficiently recognized, already made contributions to the current content and development of international law. The reason for this non-recognition is a belief still current among many jurists that the substance of public international law is almost in its entirety a creation of the Western Christian tradition.

Eight hundred years before Grotius, treatises on public international law, as we would now describe it, appeared in the Islamic world.[11] These contained discussions on the rights of captives, humanitarian rules of warfare, diplomatic protection, contracts with enemies, the honouring of treaties, the recognition of sovereign states and numerous other matters pre-eminently the province of public international law. Islam looks upon all humans as being "as equal as the teeth of a comb" and in the farewell sermon of the Prophet of Islam, one of the great human rights documents in world history, he stressed, "the Arab is not superior to the non-Arab, and the non-Arab is not superior to the Arab. Nor is the fair-skinned superior to the dark-skinned, nor the dark-skinned superior to the fair-skinned."[12] We also know that the Prophet as head of the Islamic state himself received foreign embassies with great honour in his personal mosque, wearing special robes for the occasion.[13] All of these – Qu'ranic passages as well as the traditions of the Prophet - were the subject of elaborate commentaries by the jurists and were

11 See generally Majid Khadduri, I*slam and the Modern Law of Nations,* 1956, 50 AJIL 358-72: "The Islamic System: Its Competition and Co-existence with Western Systems", *Proceedings of the American Society of International Law*, 1959,pp. 49-52. See also C.G.Weeramantry *Islamic Jurisprudence: An International Perspective,* Macmillan,1988.

12 See this writer's *Invitation to the Law,* Butterworths, 1982, p. 273, citing M.U. Akbar, *The Orations of Mohamed*, revised ed. Muhammad Ashrof, 1966.

13 For these and other reference see H.R.Hussan, *The Reconstruction of Legal Thought in Islam,* Idara al Quaran, 1974, p.172.

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assembled together in treatises such as that of Al-Shaybani. We also know that some of this material found its way into Western jurisprudence. For example, the monumental *Siete Partidas* of King Alfonso X of Castile has a section on international law which draws heavily on this Islamic material, thus making it more easily accessible to later European writers.

The extent to which Islamic thinking fertilized the Western European tradition in international law has yet to be researched, though we do know that the Crusades acted as major vehicles for the movement of ideas between East and West.

It is important to the global support of public international law norms that there be a better understanding of the cross-cultural traffic on which this discipline is based.

Coming back, however, to more modern times, the development of notions underlying the human rights concept is another fascinating field of cultural interaction. The philosophers of individual liberty such as Locke did not produce their theories full blown and unaided. They drew heavily upon the past. Locke, for example, was part of a tradition which went back, as recounted earlier, to the elevation of the status of human reasoning at the hands of Aquinas. From Aquinas the thread can be traced further back to the Jewish philosopher, Maimonides and the Islamic philosopher Averroes and through them further back to Aristotle. The philosophy of individual liberty and the dignity of the individual thus contain within themselves the confluence of at least four major cultural streams – the Greek, the Islamic, the Jewish and the Christian. Modern human rights and the principle of the rule of law are a cross-cultural product and not the exclusive invention of any one cultural group.

Moreover, with the development of the concept of human dignity, other cultural forces from the rich mosaic of world cultural traditions are joining together in reinforcing and entrenching human rights doctrine. The cultural traditions of other civilizations – Hindu, Buddhist, Chinese, African, Melanesian, Polynesian and others – can contribute new facets to public international law. Outstanding among these is the realization that the current generation of humanity is not the exclusive repository of all legal and human rights. Generations yet unborn also have rights which must be recognized in the present if those rights are not to be destroyed for the future. Such unborn generations have little, if any, legal status in the Western tradition and any legal system, municipal or international, which is built upon that supposition, is a legal system which is necessarily incomplete. We are seeing manifestations of this in the necessities for preservation of the environment and the conservation of the earth resources, both of which are being harmed by the current generation in a manner which negates the rights of posterity. Belatedly, public international law is taking note of this danger and is still evolving the concepts to deal with it. A rich body of cultural tradition ranging

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from Africa to Polynesia reminds jurists of today how far the formalistic concentration of rights in individuals alive today is a departure from global and futuristic perspectives which must be the lodestar of public international law.

These cultural traditions also remind us that just as individuals have rights, so also have groups and that while the concept of human rights for the individual is admirable, the rights of groups must not be lost sight of. All too often the exclusive concentration on the individual tends to fragment and scatter the groupings, which in the past cushioned and protected the individual. In that portion of public international law which deals with human rights, we need a continual reminder of the dangers of depriving the individual of these group protections and of thereby dissolving the cement which held societies together in the past. The task of balancing individual and group rights is thus an area of public international law where the world's cultural traditions can make a significant contribution.[14]

Given the strength in the modern world of religious traditions, such as the Buddhist, Christian, Hindu and Islamic, and that they command the allegiance of over three billion of the world's population, there cannot be any doubt that future thinking on international law can benefit deeply from the teachings contained in these traditions. It may be said by the cynic that in a world of harsh practical realities such religious teachings can find no place, but it is a reality of the geo-political scene that these religions command deep allegiance on a massive scale. Their moral authority is immense. Consequently their impact upon the world of practical politics, whether domestic or international, cannot be gainsaid. It would indeed be unrealistic to look at the practical world scene without making due allowance for the power of these religions.

This becomes especially important in public international law where the interaction between the moral principle and the legal precept becomes particularly compelling in such contexts as nuclear war, genocide, slavery, torture and fair contractual dealing in international trade. Such topics form an important part of the corpus of public international law.

The fact that the world has many cultures and that each culture is many faceted does not preclude certain underlying norms from receiving universal recognition. Locke, who wrote in his "Essay Concerning Human Understanding" that scarcely any principle of morality or rule or virtue accepted as necessary by one society was not condemned at some time by other societies,[15] himself formulated certain principles of human rights intended to be of universal applicability. The framers of the Universal Declaration of Human Rights, while conscious of cultural diversities, were fortunately not put off by them in their quest for universal norms. We must bear these in mind in the sphere of international law, which

14 On group rights in Third World society see C. G. Weeramantry, *Equality of Freedom: Some Third World Perspectives,* 1976, pp. 20-23.

15 See Locke, *An Essay concerning Human Understanding* I.ii.10.

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is feeling the impact of cultural traditions that had not directly affected it during the period between Grotius and the emergence of the United Nations. The magnitude of the change between that period and ours can be appreciated when we consider that it was not without difficulty and deep-seated reservations that Turkey came to be admitted into the "Club" of European powers which was laying down general principles of international law.

The world scene today is so markedly different from that which prevailed at the end of the nineteenth century that accommodation must necessarily be made for cultural and ideological pluralism. International law needs to mount a special effort in this direction especially as the inheritance of nineteenth century modes of thinking still pervades some areas of international law. Unless there is a special awareness of the importance of maintaining the concept of cultural and ideological pluralism there is an ever present danger of its suffocation in the midst of inherited nineteenth century thought patterns. The cause of pluralism is not served by despairing reflections on the apparent irreconcilability of divergent traditions in different countries.

III. Concepts of traditional law which would enrich modern international law

There are numerous developing areas of international law which could profit greatly from some of the perspectives ingrained in traditional legal systems, which have been obscured by the superimposition upon them of the individually-oriented and contemporaneously-focussed legal systems of the West.

With no attempt at being comprehensive, the following are offered as a specimen sampling of concepts and areas of study where a knowledge of such legal systems could be specially rewarding.

- Intergenerational rights
- Obligations *erga omnes*
- The common heritage of humanity
- Sustainable development
- Trusteeship of land
- Sanctity of land
- Environmental protection
- Group rights
- The notion of group duties
- The subjection of state sovereignty to a higher law
- The notion of the oneness of humanity
- Friendly relations between states
- The inherent dignity of every human being
- The notion of peace
- Non-violence

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- Reconciliation
- World order
- Active cooperation as opposed to passive co existence
- Cross cultural understanding
- Industrial relations
- Humanitarian rules of warfare
- The sanctity of treaties (*pacta sunt servanda*)
- Diplomatic representation
- The problem of violence
- Non-aggression
- Peaceful co-existence
- The psychology of conflict
- The causes of conflict
- The resolution of conflict

Some observations follow about major global traditions which have not yet been sufficiently used to enrich and invigorate public international law.

1. Buddhism

Buddhism is a profound source of support for many of the fundamental principles of international law. Unfortunately this body of learning has not yet been sufficiently researched from the standpoint of international law, with a few notable exceptions.[16]

The deeply philosophical approach of Buddhism not unsurprisingly gives us many psychological insights into the causes of war. The mental attitudes that lead to conflict are minutely analysed, ranging from righteous indignation to profound hatred. Righteous indignation, which is one of the principal causes of conflict, can very easily be debased and during the course of conflict does in fact become so debased. The importance of peaceful resolutions of disputes and the various ways in which peaceful resolution can be achieved are also discussed.

The causes of world disorder are examined. The question posed to the Buddha, adopted by Buddhaghosha as the opening stanza of his *Path of Purification (Visuddhi Magga)* is as follows:

> "*The inner tangle and the outer tangle*
> *This generation is entangled in a tangle*
> *And so I ask of Gotama* [17] *this question*
> *Who succeeds in disentangling this tangle.*"[18]

16 Such as that of K.N. Jayatilleke "The Principles of International Law in Buddhist Doctrine", *Recueil des Cours*, 1967-I, pp. 445-556.

17 The Buddha.

18 See C.G. Weeramantry, "Some Buddhist Perspectives on International Law'', *Boutros Boutros-Ghali Amicorum Discipulorumque Liber, Peace, Development,Democracy,* Bruylant,Bruxelles, 1998, p. 782.

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One way of disentangling the tangle is to know its causes and Buddhism is unequivocal in pointing to what is probably the principal cause - the greed and craving which afflicts not only individuals but also nations. This blinds their perception of the fact that in seeking more possessions they are depriving others of their legitimate share. An answer to the problem of national greed is education of its citizenry at an individual level.

According to Buddhist teaching one of the key contributions towards international peace is an equitable distribution of the world's resources. An equitable world order cannot in other words be achieved without an equitable economic order.

Buddhism was among the first major belief systems to elaborate the theme of the equality of all humans in considerable detail. The unity of the human species and the lack of any material distinction between its members thus goes back over 2,500 years in world tradition. Nor was this a teaching of equality in the limited Greek sense of equality among free citizens with the slave population left rightless. Buddhism drew no distinction of this sort between members of the human family. The concept of equality was expounded and explained on ethical,[19] legal,[20] moral,[21] religious,[22] sociological,[23] anthropological,[24] and biological[25] grounds.[26]

Every individual member of the human family owed duties to every other.

The advice of the Buddha was in fact sought by many rulers of his time. He was therefore called upon to apply his teachings to actual political facts and circumstances. The duties of kings, the welfare of subjects, the resolution of hostilities, equitable adjudication of the matter in contention – all of these received his attention.

The absence of dualism in Buddhism is of great importance for international law. No law of any individual sovereign had validity if it offended the basic principles as taught in the *Dhamma*. There was a profound universalism that swept through his teaching and this affords enormous reinforcement to the fundamentals of human rights and international law. International law has almost totally ignored the wealth of insights available from Buddhism to strengthen its fundamental principles and increase their universal acceptance.

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19 *Digha Nikāya,* Vol. III, p. 250, *et seq.*

20 *Majjhima Nikāya,* Vol. II, p. 84, *et seq.*

21 *op.cit.* p. 86, *et seq.*

22 *op.cit.* p. 128 et seq.147 *et seq.*

23 *op.cit.* p. 149

24 *Digha Nikāya* Vol.III, p. 93 *et seq.*

25 *ibid.*

26 For these and other references, see L.P.N. Perera, *Buddhism and Human Rights*, Karunaratne & Sons, Colombo,1991, pp. 35-36.

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One reason for this may be the enormous extent of the Buddhist scriptures ranging through multiple volumes of discourses - the *Digha Nikāya* (34 long discourses), the *Majjhima Nikāya* (152 middle length discourses), the *Samyutta Nikāya* (2889 short discourses), the *Anguttara Nikāya* (2308 short sayings, often in the form of maxims or aphorisms), and the *Khuddaka Nikāya* (over 1000 sayings in the form of stanzas or aphorisms, covering the whole range of Buddhist philosophy).[27] All of these discourses and sayings, though available in English, need to be researched by international lawyers as many principles pertinent to international law, though not directly stated, lie concealed within them.

Buddhism would lend powerful support to natural law thinking and would discourage legalism. It would extol social and economic rights and offer us pointers to ways in which the emotional causes of war can be modified if not overcome.

Buddhist analyses of violence are also relevant to our studies because they deal with institutional violence, ideological violence, defensive violence, political violence and others. Ideological violence, the cause of much conflict, and terroristic violence also come in for scrutiny.

Peaceful co-existence and non-aggression, non-alignment, the tracking down of the roots of violence to their sources, the sanctity of promises, the arms trade, the futility of collective punishment, tolerance, the right of asylum, environmental protection, individual responsibility, social duties, industrial relations, the peaceful resolution of disputes, integrity in trade – all of these of deep relevance to the development of future international law, are intensely analyzed in Buddhism. It is surely not possible to describe modern international law as a universal system if it neglects this huge source of support and inspiration.

2. Confucianism

As pointed out in a recent study, books upon international law and order do not include any meaningful discussion of Confucius or Confucianism. This is despite the fact that Confucian teaching did have much to say on such questions as world order,[28] the world community, the principle of harmony, the importance of the moral order to legal order, the goals of the state, the goals of the world community and the principles of harmony.

The notion of *ping* denoted peace, harmony, evenness, equality, fairness, and the like. The ultimate goal of the world order is *ping*.

Every individual is urged to attempt eight virtuous accomplishments of which the last is the *ping* of the world. In other words it is the obligation of each individual to do what he or she can to achieve global harmony. The duty of every individual to attempt this eighth requirement is an integral part of Confucian

27 See *supra* note 18.

28 See Mark W. Janis and Carolyn Evans, *Religion and International Law,* 1999, Martinus Nijhoff, p. 27.

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teaching. The eight virtuous accomplishments, which every individual should attempt, are laid down in the *Book of Great Learning*.

Confucian teaching envisaged the world community as all under heaven, and all under heaven are treated as one family. The term *tien-hsia* (literally all under heaven), although translated by some as referring to the kingdom of China, was extensive enough to comprehend the entire world. It was essential for a peaceful and happy China that the rest of the world under heaven also enjoyed peace and happiness.

A cardinal principle that emerges from Confucian teaching, which in the author's view is most relevant in international law, is the emphasis it places on the conduct of each individual. Modern international law tends to suffer because it confines the bulk of its attention to the conduct of states, ignoring the fact that the conduct of states is largely the impact upon those states of the individuals comprising it. There is hence a lack of emphasis on what each individual can do towards the goal of world harmony. That tends to be looked upon as the preserve of States and not the business of the individual. This personalized approach of Confucianism is fundamental to the future of international law, for unless education systems sensitize the thinking of each individual to his or her role and importance in the world order, an improvement in the world order will not be achieved. Each state would continue to play the selfish and self-interested role that has resulted in the world problems of today.

Confucian teaching is thus of cardinal value in emphasising that it is the individual human being who is the ultimate actor in all community processes. It is possibly an idea of this sort that lay behind H.G. Wells' often quoted observation that the future of humanity is "a race between education and catastrophe".

Western law has made the mistake – probably largely under the influence of positivism - of considering that Confucianism had no legal tradition as such. A well known text on Jurisprudence[29] exhibits such a misapprehension under which generations of lawyers have been trained when it says: "the Chinese had never had a legal tradition at least as that term is understood in the West. Legality has no roots in Chinese civilization, law being regarded as a sign of an imperfect society." It was the total law that Confucianism contemplated and not that part of it which falls under the rubric of positive law.

It is surely the failure to distinguish the part from the whole that causes a large segment of the world's wisdom to be discarded as irrelevant to international law. There is a great contrast between positivist law and a total legal system based upon *ping*. The error of elevating positive law to being the only law is an error into which international law, above all else, must not fall.

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29 See Dennis Lloyd, *Introduction to Jurisprudence* (4th Ed), Stevens, 1979, p. 760-61.

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The rounded concept of *Li* in Chinese law contrasts strongly in this respect with the enacted or positivist law as understood in western systems. The Chinese concept covered not merely ethical or moral rules of conduct but also juridical norms and laws.[30] Confucian teaching has insights to offer on such matters as humanitarian intervention, punitive expeditions, the "right" to revolution, economic, social, and cultural rights, freedom of opinion, and expression, and the honouring by rulers of what would today be described as human rights. The stress throughout is on duties but as Leon Duguit taught in the West, one's rights fall into place when one's duties are properly performed.

It would strengthen the acceptability of the Universal Declaration of Human Rights if for example it were more widely realized that there is a substantial concurrence of view between the Confucians and the Universal Declaration, just as it would strengthen international law if there was a better understanding of the importance of the harmony of "all under Heaven as one family".

I conclude with a passage from the Analects:

> "*When the Master went to the state of Wei, Zan Yu acted as driver to his carriage. The Master observed, "How numerous are the people!" Zan Yu asked, "Since they are thus numerous, what more shall be done for them?" "Attend to their economic well-being," was the reply. "And when their economic well-being has been attended to, what more shall be done?" The Master said "Teach them."*"[31]

Education of the citizenry towards global consciousness and duty towards all under heaven are perhaps the essence of the Confucian message for world order and international law.

3. Hinduism

The ancient law books of Hinduism had a finely nuanced concept of justice. Righteous or fair or just conduct was the subject of elaborate commentaries.

Dharma or righteousness stood supreme above the ruler and any law he may enact. This was so not only domestically but also on the international plane. It was theoretically possible for the whole world to be brought under the just rule of a universal monarch. But even such a person would not be the ultimate ruler of the world. The ultimate ruler of the world would be, not a physical person but "the kingless authority of the law". There could scarcely be a better description of international law and of the international rule of law than this eloquent description handed down to us 3000 years ago.

If we were researching the humanitarian laws of war, we would find a wealth of information in the ancient Hindu law which imposed fine limitations upon the

30 See *supra* note 28, p. 31-33.

31 See *supra* note 28, p. 49.

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extent to which combatants could go. There were limitations on the weapons they could use, the circumstances in which they could attack, and the person on whom an attack could be launched. The ancient books tell us that in warfare peasants working in the fields could not be attacked. Civilians had to be spared. On a personal note, I derived much inspiration, when writing my Dissenting Opinion in the International Court on the illegality of nuclear weapons, from the ancient Hindu texts, which categorically stated that hyper destructive weapons which went beyond the purposes of warfare could not be used lawfully[32]. In giving modern law an overall view and a sense of direction such wisdom can be a continuing source of inspiration.

This is just one illustration but many more may be cited of ways in which the deeply philosophical background of Hinduism can offer insights in our day and age.

Nor has Hinduism remained static in its legal development. Its volume of recorded legal literature rivals the Roman, and its modern exponents such as Sri Aurobindo and Mahatma Gandhi have gone far in developing concepts integrally related to law such as non-violence. Indeed the power of this concept in practical affairs was demonstrated by Mahatma Gandhi and played no little part in the eventual dismantling of the most widespread empire the world has seen.

Hinduism like many other eastern philosophies stresses not merely external conduct but turns the searchlight of scrutiny on the internal mental state that leads to that conduct. In the words of Sri Aurobindo "It says strongly enough, almost too strongly, 'Thou shouldst not kill,' but insists more firmly on the injunction, 'thou shalt not hate, thou shalt not yield to greed, anger or malice,' for these are the roots of killing."[33]

The Law of *Dharma* exempted no one, and in anticipation of the social contract theory, rulers were required to take an oath of obedience to the Laws of *Dharma.* Their right to rule was dependent on their observance of this promise.[34] Consequently the theory of sovereignty did not give absolute power to the ruler who was subject to this overriding rule of conduct. Unlike Austinian theory, which required an enforcing arm to give authority to a law, the Hindu concept of international law based itself on the moral authority of that law and thus placed international law well above the level of state sovereignty. The Hobbesian idea that "covenants without the sword are vain" had no place in the Hindu legal system.[35]

Not only the Code of Manu but also the text of the *Mahabharata* and the *Ramayana* and also the work of other jurists such as Naradha and Sukra exhibit

32 *Legality of the Threat or Use of Nuclear Weapons (Opinion Requested by the General Assembly)* I.C.J. Reports, 1996, pp.429-555.

33 Sri Aurobindo, *The Foundation of Indian Culture*, Sri Aurobindo Ashram Pondicherry, 1988, p. 91.

34 *op cit.,* p.18.

35 *op cit.,* p.107.

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an outstanding humanitarian approach in dealing with the laws of warfare. Acts prohibited include night attacks, strategies of deceit, booby traps, treachery, the molestation of non-combatants, the destruction of crops, the ill treatment of prisoners of war, and the destruction of an enemy's land by fire. Indeed the *Mahabharata* states that "Enemies captured in war are not to be killed but to be treated as one's own children".[36] There was also a principle that the prisoner had to be released after a certain period and to be sent back to his home with a proper escort. There is evidence that this was in fact followed, for Chandragupta Maurya set free prisoners captured in war. The wounded were to be well looked after and there is evidence that regular camps were established with medicine and surgical instruments to look after the wounded on the battlefield.

At the hands of a galaxy of 20th century intellectuals the humanism and the universalism of ancient Indian philosophy have been expounded, and their relevance to the modern world demonstrated. Among these figures are Rabindranath Tagore, Mahatma Gandhi, S. Radhakishnan, and Sri Aurobindho. Their philosophies and writings have received scant attention in the world of formal international law.

4. Islam

Reference has already been made to the Islamic contribution to the development of international law. This section deals in somewhat greater detail with the contents of Islamic international law.

Verses xvi: 91,92 of the Qu'ran embody the rule of *pacta sunt servanda,* beautifully elaborated in terms that fine interpretations of a treaty, like unravelling a strong thread into fine filaments, can depart from the spirit of treaties by making weak what was strong before, and should in no circumstances be used as a means of defeating its intent and becoming a basis of deceit between nations.

Islam's philosophy of all power issuing from God makes rulers only trustees of power and not absolute wielders of power. Any dualism of national and international law is thereby rejected.

Al-Shaybani 749-805 wrote an extensive treatise on international law and Shafi'i's Kitab-al-um contains an exposition of numerous principles of international law. Islamic law saw all human beings as "alike as the teeth of a comb" and there is a *hadith* of the Prophet that the "whole universe is the family of Allah..."

Humanitarian law was expounded in detail. Among acts expressly forbidden were the use of poisonous weapons, the killing of envoys, the killing of captive women, the cutting of forests and the killing of non-combatants and the destroying of harvests. Indeed concern for prisoners went so far as to ordain that their dignity was to be respected, near relatives were not to be separated and they were

36 *Mahabaratha, Shanthi Parva* 102.32.

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to be permitted to draw up their last wills which were to be transmitted to the enemy through some appropriate means.[37] Even modern conventions on humanitarian warfare could be improved from concepts and inspiration derived from a study of such ancient writings.

On the battlefield itself honourable conduct was required. Practical examples of this are to be found in Islamic history as for example Calif Abu Bakr's instruction to his commander "I enjoin upon you Ten Commandments. Remember them. Do not embezzle, do not cheat, and do not break trust..."[38]

European literature at the time of the Crusades records its surprise at the translation of some of these principles into actual practice on the field of battle. One writer, Oliverus Scholasticus, relates how the Sultan al-Malik-al-Kamil supplied a defeated Frankish army with food :

> *"Who could doubt that such goodness, friendship and charity come from God? Men whose parents, sons, and daughters, brothers and sis - ters had died in agony at our hands, whose lands we took, whom we drove naked from their homes, revived us with their own food when we were dying of hunger and showered us with kindness even when we were in their power."*[39]

In regard to the law of international trade it must not be forgotten that there was an enormous expansion of trade in the Islamic world and a growth of fresh principles of commercial law against the background of the fundamental principle of good faith. Among matters involved in such trade were international trading treaties between states, international trading agreements between individuals, and safe conduct of traders in foreign territory.[40] The prevalence of a state of war did not necessarily mean the suspension of trade. And in this context there is the tradition of the Prophet that he once sent dates from Medina to Mecca and received hides in return at a time when hostilities prevailed between Medina and Mecca.

Apart from the strict legal material, there is a vast amount of information regarding treaty practice in Islamic states. The treaties entered into between the Ottoman Empire and Christian powers (such as that between Suleiman the Magnificent and King Francis I of France in 1535), those between Islamic states inter se, trading agreements between Moghul emperors and non-Moghul Indian rulers are some examples. A well-known early example of a treaty in relation to

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37 S.R. Hussan, *The Reconstruction of Legal Thought in Islam, supra*, p. 177.

38 Ahmed Ibrahim, "Religious Belief and Humanitarian Law with Special Reference to Islam" *Journal of Malaysian and Comparative Law,* 1984, p. 133.

39 F. Heer, *The Medieval World: Europe 1100-1350*, 1968, p. 144.

40 C.G. Weeramantry, *Islamic Jurisprudence: An International Perspective,* Macmillan, 1988, p. 139.

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the large-scale exchange and ransoming of prisoners was the treaty of 804 between the Calif Haroun-al-Rashid of Baghdad and the Emperor Nicephorus.[41]

Other matters covered were the law of diplomatic protection and the law of asylum. In the human rights field some of the aspects covered were the notion of fair industrial relations, the notion of human dignity, the notion of trusteeship of property, the notion of sharing, the notion of assistance to those in need or distress, the notion of abuse of rights and the notion of privacy. There is no space here to elaborate on these, but an interesting reference to the last of these is a tradition of the Prophet, which would have enormous relevance to modern times. In relation to prying into the correspondence of others, he condemned it in terms that "he who reads a letter of his brother without his permission will read it again in hell."[42] This is as eloquent a description of the privacy of correspondence as one can find anywhere in world tradition.

These few glimpses of Islamic law will it is hoped convey some idea of the wealth that can be gained from this system if modern international law would look into its vast literature with a view to reaping from it insights and concepts which will assist considerably in its development.

5. Judaism

The Torah, or Pentateuch, the Prophets and the Writings together constitute an enormous corpus of sacred and juridical literature, the full depth of which has yet to be researched from the standpoint of their relevance to the principles of international law. The Talmuds (the Babylonian and Palestinian) were immense compilations of juristic expositions notable for their thoroughness and minuteness of detail. All this literature embodies not only a deep philosophical approach but also a very imaginative and sometimes futuristic view of the problem under discussion – as where, centuries ago, they discussed whether a robot with all the appearance of a human could be counted as a human for purposes of a prayer quorum. There can be little doubt that there are many nuggets of wisdom here which are yet to be quarried.

There is no doubt regarding the substantial input of Judaic learning into international law in its formative age. Indeed if one looks at the sources cited by Grotius himself, he makes 65 references to the Old Testament as compared with 50 references to the New.

Yet there is room for concern that all the rich literature of Judaic jurisprudence has not yet been sufficiently tapped by scholarly investigation. References are mainly to Old Testament sources, and the later literature is scantily referred to. For example, one looks in vain among many of these primary writers for references to the work of the master jurist Moses Maimonides (1135-1205). Even

41 See also A. Nussbaum, *A Concise History of the Law of Nations*, Macmillan, 1954, p. 47.

42 M.C. Bassiouni (ed. and trans.) *The Islamic Criminal Justice System,* Oceana Publications, 1982, p. 69.

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when such material is referred to, it is often at second hand - as writers like Shabtai Rosenne have pointed out.[43]

This extensive body of philosophical and analytical literature must surely contain many insights that can strengthen modern international law as it steers its way through the many complexities confronting it.

Grotius does indeed refer to post-Biblical writers such as Flavius Josephus and Philo Judaeus and so also does Gentili. Some later writers like John Selden (1584-1654) have shown a closer acquaintance with Jewish writings but much research has yet to be done on the influence of Jewish thought upon the modern founders of international law. In the words of Rosenne, "There is here a vast field for research."[44]

As with the other religions discussed, the source material needs to be carefully perused by scholars with an eye to their international law significance. A rich harvest of concepts and discussions can be expected. Materials such as the *Jewish Antiquities* of Josephus are thought to contain a "wealth of source material awaiting critical analysis from this point of view."[45]

Other material to be researched would include, importantly, Maimonides' *Law Concerning Kings and their Wars*, not to speak of his *Guide for the Perplexed*. In the former we find references to the essential features of international law and in the latter illuminating discussions of such matters as equity and industrial relations, which have an intimate bearing on human rights.

There is also much to be learnt from discussions of such topics as the pursuit of peace and the love of mankind from teachers such as Hillel (70 BC – 10 AD). His philosophy of gentleness occupies an important place in Judaic tradition, and would be an important aid to the interpretation and application of principles of international law.

It was characteristic of Jewish law that it made no sharp distinction between law and morality, viewing the two as a common system, as did other religious systems we have referred to. Out of this fusion come important perspectives which can only do lasting good to international law.

I refer finally to the teachings which placed all rulers under the authority of law and thus diminished the self-centredness of the sovereignty concept. This again would have lasting value for international law. As Maimonides taught, the king's duty was to fill the world with righteousness and whatever he did must be done by him for the sake of Heaven – a remark which reminds one of the universalism of Confucian teaching.

The words: "and they shall beat their swords into plowshares and their spears into pruning hooks; Nation shall not lift up sword against nation, neither shall they

43 *op. cit.*, p.71.

44 S. Rosenne, *op cit.*, p. 68.

45 *op cit.*, p. 74.

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learn war any more"[46] are given a prominent place at the United Nations Headquarters in New York. They may truly be said to embody the base line of international law.

There are more than twenty centuries of juristic commentary upon passages such as these, for they go back to sacred scripture. They are well worthy of further examination from the standpoint of the basic principles which will bring this Biblical vision closer to attainment.

6. Christianity

Christianity has been left to the last because both at the inception of the era of modern international law and until at least the close of the nineteenth century it was the dominant influence in international law. It is not possible to touch on its many facets of interaction with international law in the course of such a short discussion. We have already referred to some of the thoughts of Augustine and Aquinas and to the role they played in developing concepts of natural law.

In the course of the development of international law through the later centuries Christianity played many roles in fashioning the attitudes of scholars to international law and the area of its applicability. The role played by writers such as the Dominican Francisco de Vitoria (1480-1546) and the Jesuit Francisco Suarez (1548-1617) constitutes another important chapter in merging international law with theology.

When international law had broken free of theology another trend became apparent which damaged the universality of international law. This continued till well into the nineteenth century. It pertained to the circle of nations to whom international law applied. At the hands of the most respected scholars up to the end of the nineteenth century, Christianity was seen as virtually providing the admission ticket to the exclusive club of independent nations.

For James Lorimer (1818-1890), for example, membership of this select group required a "reciprocating will". There needed to be a mutual recognition of the existence of other states and a judgment that their right to existence corresponded to one's own. This judgment became easier because governments influenced by Christianity were thought by the holders of this view to be superior to other religious or secular modes of government. "If Christianity be not the test of the presence of reciprocating will in religious creeds, what have we?"[47]

For Robert Phillimore (1810-1885) as well, Christian nations deserved a privileged place in international law. "Unquestionably, however, the obligations of International Law attach with greater precision, distinctness, and accuracy to

46 Mark W. Janis and C. Evans, *op. cit.*, p. 83.

47 J. Lorimer, *The Institutes of Law: A Treatise of the Principles of Jurisprudence as Determined by Nature,* 1872.

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Christian States in their commerce with each other."[48] Even Oppenheim[49] could write that "the civilized states are, with only a few exceptions, Christian states."

All this did not bode well for the universalism which is essential to the acceptance of international law. It constructed an attitudinal barrier which needed to be broken through, regarding the competence of other cultures to make a contribution to international law.

What is more, all these interpretations misread the simplicity and universality of the basic Christian message. They made a rule of particular exclusion out of a message of universal inclusion. That message has tremendous relevance to modern international law and to its future development.

The teaching "love thy neighbour as thyself" and the elevation of this principle to the level of a pre-eminent commandment gives us a prime index of the tenderness and the sweep of the Christian message.

Who is my neighbour? The parable of the Good Samaritan places in position the basic answer to this question. The concept of neighbourhood transcends all boundaries of race and religion and privilege. All humans alike are neighbours to each other, even as all humans alike belong to the same family under God.

What is my duty to my neighbour? The parable answers this in terms of affirmative duty rather than passive toleration. One must go that extra mile to help a neighbour in distress.

A careful study of the Christian scriptures and juristic writings with a view to their international law and human rights content would certainly reveal vast funds of further inspiration, which are not often brought into modern legal discussions. Among the concepts that would receive support from such a systematic study are the following:

- The sanctity of treaties
- Limitations on the absoluteness of state sovereignty
- The brotherhood and sisterhood of all humanity
- Peaceful and friendly relations between states
- The concept of universalism
- The concept of peace
- The duty of environmental protection
- The higher or universal law standing over the law of states
- The principle of intergenerational fairness
- Humanitarian conduct in peace and war
- The criminality of genocide in any shape or form or for whatever reason
- The duty of active cooperation of states
- The peaceful resolution of disputes

48 R. Phillimore, *Commentaries upon International Law*, 1855, pp. 23-24.
49 *International Law: A Treatise,* 1905, p. 10.

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- The observance of good faith in all international dealings
- The rejection of colonialism and domination over other nations
- The need for the elimination of the hatreds which are the cause of disputes
- The rejection of legalism
- A duty-related rather than rights-related view of human rights
- Non discrimination among all human beings
- Equality of all human beings as members of a common family, irrespective of differences in race, nation, caste, creed, gender, or age
- The duty of affirmative action to assist those in distress
- The duty to observe non-violence in the settlement of disputes
- The prohibition of slavery
- The condemnation of torture in every shape or form
- The rejection of forced labour

In regard to the higher law, this has been expounded at great length by commentators down the ages. Reference has already been made to some aspects of this in the discussion of natural law.

Another aspect of the Christian scriptures that needs to be emphasized in a study of international law is the condemnation of legalism.

Christianity is particularly strong on the rejection of legalism in all its forms and this would apply to international law as well. An important message of the Christian scriptures is that the letter of the law should yield to the spirit. Harsh and literal interpretation is to yield to softer interpretations more consonant with the object and purposes of the text. This was the basis for the severe castigation of lawyers by Jesus in at least three places in the New Testament. Jesus was protesting against formal interpretations that belied the spirit or purpose of a law and it is for these reasons that commentators have observed "lawyers generally get a bad press in the New Testament."[50] While adhering to the letter and the ritual they "have neglected the more important matters of the law – justice, mercy and faithfulness."[51]

Another aspect which needs attention is the concept of active assistance to others, as indicated in the Good Samaritan example. This duty of assistance must be taken to refer not merely to individuals but should apply to nations as well.

It would be an enormous task beyond the scope of this chapter to examine the vast literature that needs to be surveyed for the purposes of such studies. It will suffice for present purposes to refer to the numerous insights that can be gained from a law-related study of even one small piece of scripture such as the

50 Keith Mason, *Constancy & Change*, Federation Press, 1990, p. 29.

51 Matthew 23:24.

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Lord's Prayer. The author has attempted to do this[52] and would refer the reader to this small study as an example of the wealth of material yet awaiting research conducted with an eye to its relevance to international law.

IV. Article 38 (1)(c) of the Statute of the International Court of Justice

This study has designedly been written in terms of an overview of major world cultures. The value of a more intimate acquaintance with their traditions and literature is not however confined to a macro vision of the cultures concerned. It also has value at the micro level of each individual principle, and this assumes special importance in view of Article 38 (1)(c) of the Statute of the International Court of Justice. Since international law specifically includes "the general principles of law recognized by civilized nations" a heavy burden is thrown upon international lawyers and judges to ascertain what these are and not to form their conclusions on a survey of only part of the field. The greater familiarity with other systems which is advocated in this chapter as a *sine qua non* to the work of the international lawyer of the future, will facilitate a search for those general principles – a search which is often only a partial search under prevailing conditions.

There is not the space here to illustrate the many principles that have entered the corpus of public international law under this head, but they range all the way from principles such as estoppel to overarching principles such as *pacta sunt ser - vanda* and *abus de droit,* not to speak of the seminally important rules relating to interpretation of treaties.

The approach advocated in this article will enrich the development of international law through a more fruitful use of the comparatively neglected provisions of article 38 (1)(c).

Indeed this is a fruitful area for the enlistment of the discipline of comparative law into the service of public international law. In the words of a leading treatise on comparative law "To do this would avoid reducing the valuable notion of 'general principles of law' to a mere minimum standard". We have too long been satisfied with minimum standards of search into this vital repository of concepts and principles wherewith to enrich the developing body of international law. The broader perspectives pleaded for in this chapter can revitalize this search.

V. Conclusion

This chapter has attempted to depict a few areas of possible cross-cultural and interdisciplinary research. This can be universally valuable in strengthening the integrity of the fabric of international law which, while being so extensive as to form a canopy around the entire world, must at the same time be so strong as

52 See C.G.Weeramantry, *The Lord's Prayer: Bridge to a Better World,* Liguori/Triumph, 1998.

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to resist wear and tear in areas where it comes under particular resistance and tension. The task is immense because of the extensive nature of the literature involved. This literature must be subjected to searching study and examination by minds attuned to the legal nuances embedded in these teachings and traditions. This largely unaddressed task gives the lawyers of the future an unrivalled opportunity to use their skills towards the construction of a more peaceful world order.

The task is overdue. The work is intense. The reward will be rich. A world racked by conflict cannot afford to neglect it much longer.

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Annex 550

"The Maastricht Principles on the Human Rights of Future Generations", *Maastricht Centre for Human Rights,* 3 February 2023

Maastricht Principles on The Human Rights of Future Generations

ADOPTED ON 3 February 2023[1]

Introduction

The rights of future generations have long been neglected in the analysis and application of human rights. Yet, human rights law does not limit itself to present generations. The foundations for international law to address the rights of future generations are established in international instruments in an array of subject areas spanning nearly a century; constitutions and legislative acts adopted by the majority of the World's States; in the laws, traditions, and cosmologies of Indigenous Peoples from every continent; and in the doctrine of major faith traditions representing the majority of the world's people.

The Maastricht Principles on the Human Rights of Future Generations seek to clarify the present state of international law as it applies to the human rights of future generations. The Principles consolidate the developing legal framework and affirm binding obligations of States and other actors as prescribed under international and human rights law. They also provide a progressive interpretation and development of existing human rights standards in the context of the human rights of future generations. They further recognize that States may incur additional obligations as human rights law continues to evolve.

These Principles provide examples of how realizing rights of future generations requires attention to the distinct rights of particular groups and peoples, but does not do so comprehensively. It is important to read these principles together with other human rights standards setting out the implications of human rights for particular groups, including groups subject to historic and current systemic discrimination in its many forms.

The Principles represent the result of a process of close to six years of research, dialogue and collective brainstorming, with the engagement of a range of academic experts, national and regional current or former human rights mandate holders, civil society organizations, members of Indigenous Peoples, and social movements. They build on historic traditions and knowledge spanning millennia.

The Principles were adopted in Maastricht on 3 February 2023. Signatories include experts located in all regions of the world and include current and former members of international human rights treaty bodies, regional human rights bodies, and former and current Special Rapporteurs of the United Nations Human Rights Council. This initiative builds on expert legal opinions adopted in Maastricht, the Limburg Principles

[1] Drafting Group Members: Sandy Liebenberg (Chair); Ashfaq Khalfan; Magdalena Sepúlveda Carmona; Miloon Kothari; Sharon Venne-Manyfingers; Margaretha Wewerinke-Singh and Carroll Muffett.

on the Implementation of the International Covenant on Economic, Social and Cultural Rights (1986); the Maastricht Guidelines on Violations of Economic, Social and Cultural Rights (1997); and the Maastricht Principles on Extraterritorial Obligations of States in the area of Economic, Social and Cultural Rights (2011) and its accompanying commentary.

The full explanation of each Principle, and the sources supporting them will be set out in the Commentary to these Principles.

Preamble

I. The Universal Declaration of Human Rights, the International Covenant on Economic, Social, Cultural Rights, and the International Covenant on Civil and Political Rights all proclaim that recognition of the inherent dignity and the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world.

II. Neither the Universal Declaration of Human Rights, nor any other human rights instrument contains a temporal limitation or limits rights to the present time. Human rights extend to all members of the human family, including both present and future generations.

III. Human generations exist within an unbroken continuum that is continually renewed and redefined as untold new members join the living human community. Any treatment of human generations and their respective rights must recognize and reflect this continuum.

IV. The human rights of future generations form an essential dimension of humankind's duty to uphold the inherent dignity, equality, and inalienable rights of all.

V. Decisions being taken by those currently living can affect the lives and rights of those born years, decades, or many centuries in the future. In recent decades, the need to recognize the intergenerational dimensions of present conduct have taken on increasing urgency. Humanity, the Earth on which we live, the natural systems of which we are but one part, and our political, social, cultural and economic systems, are in the midst of profound, rapid, and perilous change at humanity's own hands.

VI. Recognizing and ensuring the rights of future generations demands an evolution of decision-making processes to consider and ensure both justice and sustainability across an array of timescales including the present, near term and distant future.

VII. Children and youth are closest in time to generations still to come and thus occupy a unique position, and have an important role to play, within this transition to long-term, multigenerational thinking. Accordingly, their perspectives and participation in decision-making with respect to long-term and intergenerational risks must be accorded special weight.

VIII. Intergenerational justice has both individual and collective dimensions.

IX. Women and girls continue to bear the burden of many of societies' greatest challenges. Pervasive social norms and gender stereotypes continue to hold society back from attaining substantive gender equality. Women and girls face systemic discrimination in their enjoyment of all human rights, including a lack of meaningful participation in decision-making processes despite their influence and vital role in securing community and household resources. Gender inequality, if unaddressed, undermines the rights of both present and future generations.

X. Systematic racial, ethnic, religious and other forms of discrimination, exploitation and the inequitable distribution of wealth, resources and opportunities, between and within countries, undermine the rights of present generations and compound the threats to future generations. Accordingly, efforts to address and remedy intragenerational injustice are essential to achieving justice between generations. This requires the fulfilment by States of their extraterritorial obligations, including in the context of the regulation of transnational corporations.

XI. The worldviews and ways of life of many Indigenous Peoples reflect the continuum of the relationship between present and future generations and the intrinsic linkage between humankind and the land and ecosystems of which humanity is a part. These systems, and the continuum and interlinkages they safeguard, are endangered through the taking and degradation of Indigenous Peoples' lands, territories, and resources. Accordingly, the full recognition of the sovereignty and effective implementation of the rights and sovereignty of Indigenous Peoples is a shared obligation to both present and future generations of humanity.

XII. Peasants and traditional communities, including fishers, pastoralists, forest-dependent people, nomadic people and rural women play a key role in conserving biodiversity and ensuring adequate and sustainable food systems for both present and future generations. Safeguarding their rights and resources is critical for safeguarding and realizing the human rights of future generations.

XIII. Humanity is a part of the world, not apart from it. The rights of future generations must be interpreted and applied in light of humanity's dependence on and responsibility to Earth's natural systems, now and throughout our species' future.

XIV. The human rights of future generations must be understood, interpreted, and integrated within the evolving legal context recognizing humanity's relationships with the natural world, and the best available science. This context includes the right to a clean, healthy and sustainable environment, the growing recognition of the rights of Nature, and the knowledge systems of Indigenous Peoples, local and traditional communities.

XV. The cessation of unsustainable patterns of production, consumption and lifestyles is required to guarantee the full enjoyment of human rights, including economic, social, cultural and environmental rights, by all members of present and future

generations. Human development must be decoupled from the destruction of Nature and the overconsumption of natural resources to achieve the realization of the human rights of present and future generations and the integrity of nature and natural systems.

I. GENERAL PROVISIONS

1. Definition: Future Generations

For the purposes of these Principles, future generations are those generations that do not yet exist but will exist and who will inherit the Earth. Future generations include persons, groups and Peoples.

2. Legal Basis for the Human Rights of Future Generations

2.1. Future generations are legally entitled to human rights on the basis of amongst others:

a) International law in its various forms which recognizes human rights for all people, without limiting these rights to present generations;

b) International law in its various forms that explicitly or implicitly recognize obligations and responsibilities towards future generations, and seek to ensure intergenerational equity; and

c) General principles of law, as reflected in laws, norms, customs and values of States and peoples from all global regions and belief systems that recognize obligations and responsibilities towards future generations, or that are and will continue to be relevant to the protection of the human rights of all, without limiting them to present generations.

2.2. The above bases do not preclude other sources of law recognizing the rights of future generations that are consistent with these Principles.

3. Limitations and Derogations

States may only subject human rights, including the rights of present and future generations, to limitations and derogations expressly permitted under international law pertaining to those specific rights, and subject to the procedures and safeguards prescribed in the relevant international law.

4. Interpretation

a) Nothing in these Principles should be understood to affect any national or international standards that are more conducive to the realization of the rights of future generations.

b) Nothing in these Principles may be interpreted to imply that any State, group, or person has a right to engage in any activity or to perform any act aimed at

undermining any human rights recognized in these Principles, whether those of present or future generations.

c) Nothing in these Principles recognizes any rights of human embryos or fetuses to be born, nor does it recognize an obligation on any individual to give birth to another. These Principles may not be construed as accepting any interferences with the bodily autonomy of women, girls, and others who can become pregnant, including their actions and decisions around pregnancy or abortion and other sexual and reproductive health and rights.

d) These Principles must be interpreted and applied in a manner that is consistent with humanity's dependence on Nature and all living beings, and with the need to uphold the realization of the rights of Nature and all living beings.

5. Universality and Indivisibility of Human Rights

a) All human beings - in the past, present and future – are equal in dignity and entitled to the full and equal enjoyment of human rights.

b) All human rights are universal, indivisible, interdependent and interrelated. Future generations are entitled to all individual and collective human rights, including but not limited to, civil and political rights, economic, social and cultural rights, the right to a clean, healthy and sustainable environment; the right to development; the right to self-determination; and the right to peace.

6. Equality and Non-discrimination

a) Future generations have the right to equal enjoyment of all human rights. States must guarantee the rights of future generations as set out in these principles without discrimination of any kind. States and other duty bearers must refrain from any conduct which can reasonably be expected to result in, or perpetuate, any form of discrimination against future generations.

b) States must eliminate all forms of direct and indirect discrimination, including intersectional discrimination, on grounds of race, color, ethnic origin, sex, gender, sexual orientation, gender identity, marital and family status, work, descent, disability, health status, place of residence, age, national or social origin, religion, culture or language, political or other opinion, property, birth, economic and social situation, or any other status recognized, or to be recognized under international human rights law.

c) States must protect present and future generations against all forms of discrimination by public and private actors and prevent the emergence of new forms of discrimination.

d) States must take special measures to eliminate and prevent all forms of discrimination against groups and peoples that have experienced historical and/or systemic forms of discrimination such as slavery, colonialism, racism, discriminatory gender norms and practices and patriarchy. Such measures must include eliminating and preventing the intergenerational transmission of

inequality, poverty and oppression. States must also redress the continuing impacts of past injustices in order to ensure that present and future generations are not subject to similar abuses. Special measures must be continued until the full and equal enjoyment of human rights by all is achieved in law and in practice.

e) Future generations must be free from intergenerational discrimination. This discrimination includes but is not limited to:

i. The waste, destruction, or unsustainable use of resources essential to human life;

ii. Shifting the burden of responding to present crises to future generations; and

iii. According less value to future lives and rights than the lives and rights of present generations, including discounting the impacts and burdens of present conduct on the lives and rights of future generations.

7. Intragenerational and Intergenerational Human Rights Obligations

a) States must address and remedy intragenerational human rights violations – that is violations affecting members of present generations - in order to both realize the human rights of present generations and to avoid transmitting these violations to future generations.

b) States must respect and ensure the full enjoyment of children's human rights in the present as well as ensuring that their human rights in the future are not jeopardized, and refrain from conduct that would undermine their human rights as adult persons.

c) To meet their obligations to future generations, States must necessarily impose reasonable restrictions on activities that undermine the rights of future generations, including the unsustainable use of natural resources and the destruction of Nature. Such restrictions must not impair or nullify the enjoyment of human rights of present generations; must rectify the vastly disproportionate levels of control over and use of resources by some members of the present generation; and not impose disproportionate burdens on disadvantaged groups.

8. Intergenerational Duties and Trusteeship

a) Humanity is of the Earth, wholly dependent upon it, and interdependent with it. Every generation lives on the Earth and has an interlinked relationship with Nature and its biodiverse ecosystems. During their time on Earth, each generation must act as trustees of the Earth for future generations. This trusteeship must be carried out in harmony with all living beings and Nature.

b) Each generation has the duty to protect and sustain the Earth's natural and cultural heritage for future generations.

c) The principle of trusteeship and intergenerational duties includes the decisions each generation makes about the near-Earth environment and the Moon.

9. Prevention and Precaution

a) Where there are reasonable grounds for concern that the impacts of State or non-State conduct, whether singly or in aggregate, may result in violations of the human rights of future generations, States have an obligation to prevent the harm, and must take all reasonable steps to avoid or minimize such harm.

b) Doing so demands a strong approach to precaution, particularly when conduct threatens irreparable harm to the Earth's ability to sustain human life or to the common biological and cultural heritage of humankind.

c) The burden of proof in all circumstances must lie with those who would undertake or persist in the conduct involved, not with those who might be harmed as a result. This burden grows proportionately greater as the scale, scope, and irremediability of threats to rights of future generations increases.

10. International Solidarity

a) All human beings, whether within present or future generations, are entitled to a social and international order in which rights and freedoms can be realized for all. Such an international order is only possible, now or in the future, if people, groups and States adopt the principle of international solidarity.

b) States have an individual and collective duty to recognize, respect and practice international solidarity in their relations with each other to ensure the rights of present and future generations, including the right to live in a clean, healthy and sustainable environment, and the rights of nature.

11. Learning from and Upholding the Rights of Indigenous Peoples

a) In implementing and upholding the rights of future generations, States and non-state actors should draw inspiration and guidance from Indigenous Peoples' knowledges, cultures and traditional practices which contribute to sustainable and equitable development and the proper management of the environment.

b) Indigenous Peoples have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, and other resources, and to uphold their responsibilities to future generations in this regard. States must respect and take active measures to protect the sovereignty of Indigenous Peoples over the lands, territories and resources they have traditionally owned, occupied or otherwise used or acquired.

c) States must respect and protect the rights of Indigenous Peoples to maintain their institutions, traditional lifestyles, languages, cultures, knowledge systems,

and spiritual ontologies for the benefit of present and future generations of Indigenous Peoples and for future generations of humankind.

12. Peasants, Local and Traditional Communities

a) Peasants, local, and traditional communities, including small-scale fishers and fish workers, pastoralists, and forest-dependent communities, have a special relationship with the land, water, and natural processes on which they depend for their livelihoods. They play a vital role in conserving and restoring biodiversity, protecting cultural heritage, undertaking sustainable practices of agricultural production, and ensuring food security for present and future generations. States should draw inspiration and guidance from their knowledge, traditions, and practices.

b) States must safeguard the full and equal enjoyment of all human rights to peasants and traditional communities, including, individually and collectively, their right to land, traditional knowledge, and seed systems; to participate equitably in sharing the benefits arising from the utilization of plant genetic resources; and to participate in the making of decisions on matters relating to their rights. In doing so, States must ensure that this knowledge and these vital resources remain available to future generations.

II. STATE OBLIGATIONS

13. Obligations to Respect, Protect, and Fulfil the Human Rights of Future Generations

a) States have obligations to respect, protect, and fulfil the human rights of future generations.

b) These obligations extend to all conduct of States, whether through actions and omissions, and whether undertaken individually or collectively, including decisions made in their capacity as members of international or regional organizations. Such conduct includes, but is not limited to, the adoption or implementation of policies, practices, programs and legislation.

c) Failure to comply with these obligations constitutes a violation of the rights of future generations.

d) States must ensure an effective remedy for failure to respect, protect and fulfil these rights as set out in section IV (Accountability and Remedies).

14. Scope of Jurisdiction

Each State has obligations to respect, protect and fulfil the human rights of future generations in any of the following circumstances:

a) Situations over which it exercises authority or effective control, whether or not such control is exercised in accordance with international law;

b) Situations over which its conduct brings about foreseeable effects in the enjoyment of human rights for present or future generations;

c) Situations in which the State, acting separately or jointly, whether through its executive, legislative or judicial branches, is in a position to exercise decisive influence, or to take measures to realize the human rights of future generations in accordance with international law.

15. Limits to the Entitlement to Exercise Jurisdiction

The State's obligation to respect, protect and fulfil the human rights of future generations does not authorize a State to act in violation of the United Nations Charter and general international law.

16. Obligation to Respect the Human Rights of Future Generations

States must refrain from conduct they foresee, or ought reasonably to foresee, will create or contribute to, a substantial risk of violations of the human rights of future generations.

17. Violations of the Obligation to Respect

Violations of obligations to respect the human rights of future generations include, but are not limited to:

a) Depriving future generations of sustainable and equitable enjoyment of natural resources, Nature or ecosystems necessary for the enjoyment of their rights to life, health, and an adequate standard of living for themselves and their families, including the rights to food, water, housing and sanitation;

b) Unsustainably using and depleting natural resources;

c) Polluting or degrading ecosystems;

d) Contributing to a decline in biodiversity or to anthropogenic climate change;

e) Creating human rights risks resulting from the development and/or deployment of technologies for reducing greenhouse gas emissions or removal of carbon from the atmosphere;

f) Engaging in conduct that results in discriminatory access to natural resources and benefits enjoyed by future generations as compared to present generations;

g) Impairing the ability of future generations to prevent and respond to climate change and other forms of environmental harm;

h) Censoring, withholding, intentionally misrepresenting, or criminalizing the provision of information related to the climate crisis;

i) Entering or remaining in bilateral or multilateral agreements that undermine the enjoyment of human rights by future generations;

j) Interfering with the voluntary perpetuation of a community or peoples' cultural legacy to future generations;

k) Taking measures that are foreseeably likely to result in displacement of future generations from their land, territories and/or housing, or that deprive them of enjoyment of Nature, ecosystems or natural resources;

l) Developing or using surveillance or data gathering technologies or other means of social control that would infringe the human rights of future generations;

m) Developing or using artificial intelligence systems that threaten the full enjoyment of human rights of future generations;

n) Developing or using weapons of mass destruction, including, but not limited to, inhumane conventional weapons, nuclear and biological weapons;

o) Producing or facilitating the production of any waste material or hazardous substances of a kind, or at a scale, that cannot be soundly managed, and safely and completely disposed of by the generation that produced it;

p) Developing or using reproductive technologies that threaten or violate future generations' human rights, including but not limited to, the rights to privacy, health, safety, bodily integrity, and equality;

q) Unjustifiably reducing expenditure on programs and institutions required to realize human rights, thus putting future generations at risk of diminished enjoyment of their rights.

18. Obligation to Protect the Human Rights of Future Generations

a) States must take all necessary measures to protect the human rights of future generations against substantial risks posed by the conduct of public and private actors, including business enterprises.

b) States have a continuing obligation to reasonably foresee and prevent the creation of circumstances likely to result in the violations of the human rights of future generations.

c) Necessary measures include, but are not limited to:

i. Adopting and implementing appropriate legislative and administrative measures as well as establishing procedures, institutions and mechanisms so as to identify and effectively prevent national and international threats to the human rights of future generations;

ii. Establishing special mechanisms, processes or institutions to monitor and report on the extent to which public bodies are setting and meeting their human rights obligations towards future generations;

iii. Ensuring effective and accessible judicial and other remedies for violations of the human rights of future generations in accordance with Part V.

19. Violations of the Obligation to Protect

Violations of obligations to protect the human rights of future generations by States include, but are not limited to:

a) The failure to adequately monitor and regulate the conduct of public or non-State actors where it is reasonably foreseeable that such conduct will impair future generations' human rights, or failing to hold them accountable for such conduct;

b) The failure by States to phase out fossil fuels within the shortest possible time, with States with the greatest responsibility and capacity to move most expeditiously;

c) The failure to avert, minimize and address loss and damage associated with the adverse effects of climate change; including the failure of States with greater responsibility and capability to adequately contribute both financially and through all appropriate policies and measures;

d) The failure to take steps to protect future generations from biological risks and threats;

e) The failure to prevent the degradation or destruction of irreplaceable topsoils and freshwater vital to sustaining the lives and livelihoods of future generations;

f) The failure to effectively regulate, and where appropriate prohibit, scientific research and activities that pose a reasonably foreseeable and substantial risk to the human rights of future generations, including genetic engineering and geo-engineering;

g) The failure to adopt effective measures to protect State and international decision-making processes from undue corporate influence or corporate capture which nullifies or impairs the human rights of future generations;

h) The failure to prevent the monopolization of access to knowledge and abusive corporate control of data required for the realization of the human rights of future generations;

i) The failure to adopt legislation, programs, and policies to protect the right to work and rights in work in the context of technological innovations that pose a substantial and reasonably foreseeable risk to the full enjoyment of these rights by future generations;

j) The failure to protect Indigenous Peoples, peasants and traditional communities' rights and prevent the appropriation of their systems of knowledge by State and non-State actors;

k) The failure to investigate and provide appropriate remedies for human rights abuses by non-State actors, including prosecution where appropriate, and reparation.

20. Obligation to Fulfil Human Rights of Future Generations

a) States must take all necessary measures to fulfil the human rights of future generations, including by providing and mobilizing adequate financial resources and technical assistance.

b) States must create an enabling environment to prevent and remove the causes of asymmetries and inequalities between and within States, and the structural obstacles and factors that generate or perpetrate poverty and inequality for future generations.

c) Necessary measures include, but are not limited to:

i. Recognizing the human rights of future generations in appropriate normative instruments, such as national constitutions and legislation;

ii. Adopting framework legislation that allocates duties and responsibilities in relation to the fulfilment of the rights of future generations to different levels and branches of the State and dedicated agencies and commissions, and sets appropriate time-bound targets;

iii. Establishing a domestic mechanism that conducts a prior review or audit of the potential effects of legislation, bills and policies and other governmental decisions on the human rights of future generations;

iv. Imposing duties on State and non-State actors to carry out environmental and human rights impact assessments of decisions, explicitly including impacts on the rights of future generations;

v. Ensuring that the burdens of mitigating and remedying climate change and other forms of environmental destruction are not shifted to future generations;

vi. Ensuring that disadvantaged groups, developing States, in particular least developed States, small island developing States, and States in conflict and post-conflict situations do not bear disproportionate costs and burdens of mitigating and remedying environmental destruction;

vii. Designing and implementing educational and awareness programs on the human rights of future generations;

viii. Taking positive measures to facilitate knowledge and understanding of the human rights of future generations;

ix. Phasing out unsustainable consumption and production patterns and waste generation that jeopardizes the Earth's ability to sustain future generations. Wealthier States must proceed more expeditiously under the principle of common but differentiated responsibilities and respective capabilities;

x. Developing and implementing human rights-based governance and regulation of information and communication technologies that ensure, non-

discriminatory access to the internet, and public control of data infrastructure;

xi. Providing financial and other forms of support to representatives of future generations to participate in public deliberation, mobilize, and advocate for their human rights;

xii. Creating an enabling environment that fosters and promotes the capacity of individuals, community-based organizations, social movements, non-governmental organizations, and Indigenous Peoples to defend all the human rights of future generations, including the right to self-determination;

xiii. Removing barriers for women and girls to participate fully and equally in education and the economy, including in areas in which they are under-represented, such as science, technology, engineering and mathematics.

21. Violations of the Obligation to Fulfil

Violations of obligations to fulfil the human rights of future generations by States include, but are not limited to:

a) The failure to take positive measures to facilitate knowledge and understanding of the human rights of future generations;

b) The failure to adopt and implement legislation, policies and programs to eradicate the intergenerational transmission of poverty and disadvantage;

c) The failure to establish appropriate monitoring mechanisms to evaluate progress in the fulfilment of rights, including the rights of future generations;

d) The failure to ensure that the rights of future generations are fully integrated in national human rights strategies and plans of action;

e) The failure to ensure, at the very least, the satisfaction of essential levels of social, economic and cultural rights for present generations, and to take measures that enable future generations to ensure these levels for themselves;

f) The failure to take individual and collective measures to reduce inequality both within and between States;

g) The failure to mobilize and allocate adequate resources, including from international assistance and cooperation, to facilitate the full and equal enjoyment of human rights by future generations;

h) The failure to invest adequate resources to ensure a just and fair transition from the production and use of fossil fuels and other ecologically harmful activities;

i) The failure to take appropriate measures to prevent potential public health emergencies in the future;

j) The adoption of retrogressive measures that result in the unjustified reduction or diminishment in the enjoyment of human rights by future generations;

k) The failure to prioritize the realization of the rights of marginalized and disadvantaged groups in realizing the rights of future generations.

22. Participation and Representation

a) Future generations must be represented meaningfully and effectively in decision-making that may impact on their enjoyment of human rights.

b) States must create the enabling conditions for representation of future generations to participate in decision-making. This includes recognizing bodies established by Indigenous Peoples, peasants and traditional communities that have developed their own mechanisms to represent future generations.

c) States must recognize and respect that present children, adolescents and youth occupy a proximate position to future generations, and must protect their rights to be heard and other participatory rights, including when advocating for human rights on behalf of themselves and future generations.

d) States must create accessible and inclusive bodies and institutions at all levels to ensure that the representatives of future generations can effectively participate in decision-making that affects their human rights. Examples of such bodies and institutions include: Ombudspersons, guardians, trustees or commissioners; designated seats in parliaments, National Tribunals to protect Nature and/or National Human Rights Institutions. Special attention must be paid to ensure that these institutions and mechanisms are diverse and include meaningful and effective participation by groups that are disadvantaged or who have experienced systemic discrimination. The independence of such institutions must be guaranteed.

e) States must take adequate and effective measures to guarantee the rights of individuals or groups of individuals working to protect or promote the rights of future generations, including women, children and youth, Indigenous Peoples and environmental and human rights defenders. Such protection must ensure freedom from attacks, threats, intimidation, retaliation, stigmatization or criminalization.

23. Access to Information

a) States must make every effort to ensure easy, prompt, effective and practical access to comprehensible information about issues that may affect the human rights of future generations, including by proactively making this information available. They must also put in place procedures that provide representatives of future generations with the right to seek and receive such access to information, and ensure transparency about decisions reached.

b) Fees, where charged, should not constitute an unreasonable impediment to access to information, and an appeals system should be in place to challenge failures to provide information.

c) States must provide and disseminate information on matters that are important for the effective protection of the human rights of future generations, such as environmental and climate related information, information on inter-generational toxic, chemical and radiological hazards, technological developments and scientific research. They must respect, protect, and fulfil the freedom to seek, receive, publish and disseminate such information.

d) States must ensure disclosure of information necessary to fully and properly identify State and non-State actors that may be responsible for human rights impacts on future generations.

e) Information should be provided in languages used by affected peoples, groups and communities, in alternative formats, and through suitable channels of communication that are accessible to disadvantaged groups. Information must also be disseminated in an accessible manner for persons with disabilities, including through braille and other assistive technologies.

f) States must refrain from the dissemination of false and misleading information on issues that are important for the protection of the human rights of future generations including, but not limited, to climate change, the implications of technological developments, and scientific research. They must counter and, where appropriate, prevent dissemination of such misinformation by other actors. They should regulate and address conflicts of interest that undermine the right to information.

24. Extraterritorial Obligations

a) States have obligations towards future generations who will exist within their territory and outside their borders. These arise on the basis of:

i. obligations relating to the acts and omissions of a State, within or beyond its territory, that have effects on the enjoyment of human rights outside of that State's territory; and

ii. obligations of a global character that are set out in the Charter of the United Nations and human rights instruments to take action, separately, and jointly through international cooperation, to realize human rights universally.

b) States must take all appropriate legal, political, economic and diplomatic measures to refrain from conduct that would create a reasonably foreseeable risk of impairing the enjoyment of human rights by future generations, including outside their territory. They must conduct regular assessments of the extraterritorial impacts of their laws, policies and practices.

c) States must prevent corporations and other non-state actors under their jurisdiction from engaging in conduct domestically or outside their borders that

would create a reasonably foreseeable risk of impairing the enjoyment of human rights by future generations, including outside their territory. States should provide effective judicial or other State-based mechanisms to hold corporations and other non-state actors legally accountable for such violations.

d) States must, individually and jointly, take deliberate, specific, and targeted measures in decisions and international agreements to create an international enabling environment conducive to protecting the rights of present and future generations. Such measures must include economic, social and environmental and climate-related measures. These measures must be taken in accordance with equity, and the common but differentiated responsibilities and respective capabilities of States.

e) States must ensure that international trade and investment agreements are applied and interpreted in a manner consistent with the human rights of future generations, and where necessary to realize these rights, terminate, amend or withdraw from existing agreements. Consistency between trade and investment agreements and human rights obligations require that the former be designed, implemented, applied and interpreted in a manner that does not undermine or restrict the State's capacity to fulfil their human rights obligations. They have the duty to notify, consult and negotiate with other States in situations where there is a substantial and foreseeable risk of violating the human rights of future generations.

f) States have an obligation to provide international assistance commensurate with their capacities, resources and influence, and to cooperate with each other, to ensure respect for, and the protection and fulfilment of, the human rights of future generations, as established in the Charter of the United Nations and in international human rights treaties.

g) States in a position to do so should individually and collectively take steps to prevent and resolve unsustainable State debt (including, as appropriate, through unconditional debt relief) owed by other States that will infringe the human rights of future generations.

h) States in a position to do so should provide international assistance, including financial, technological, and other forms of assistance, to contribute to the realization of human rights of present and future generations.

i) International assistance should not undermine national development strategies or polices and domestic accountability mechanisms and procedures and must observe international human rights standards, including the right to self-determination, the right to participate in decision-making, and the protection of the human rights of future generations.

j) States providing aid and those receiving it should be accountable to present and future generations for their actions and the results of their interventions. This requires that mechanisms are created for representatives of future

generations to participate in decision-making about international assistance, and to seek remedy and redress on behalf of future generations.

III. OBLIGATIONS, DUTIES AND RESPONSIBILITIES OF OTHER ACTORS

25. Duties and Responsibilities of Non-State Actors Including Business Enterprises

a) Non-State actors, including business enterprises, must at the very minimum, respect the human rights of future generations, and thus refrain from causing or contributing to adverse impacts on their human rights through their activities, products or services, and prevent harm, mitigate risk and remedy such impacts when they occur.

b) Businesses and other non-state actors whose actions may negatively affect the enjoyment of human rights by future generations must adopt a clear policy commitment to respect future generations' human rights. They must comply with their duty of care including along their value chains. They must undertake human rights due diligence processes to identify and assess any actual or potential impacts on human rights posed by their activities, products and services in all their business relationships. They must also disclose, prevent harm, mitigate risks and remedy the adverse effects of their actions on the human rights of future generations.

c) Non-state actors that breach these duties and responsibilities should be held accountable under international law.

26. Obligations of Intergovernmental Organizations

a) States and international institutions of which they are members must create an enabling global environment with the aim of achieving the full realization of human rights of future generations.

b) International financial institutions and other inter-governmental and supranational institutions are subjects of international law and have a duty to not impair the ability of their members to comply with their legal obligations. They must accordingly respect the human rights of future generations, and engage in conduct consistent with the realization of these rights. They must comply with all obligations imposed by the general rules of international law and ensure access to remedies for any violations of their obligations towards future generations.

c) International financial institutions and other inter-governmental and supranational institutions must ensure that their policies, practices, and economic reform measures will contribute to the realization of, and not undermine, the human rights obligations of States towards future generations. They must refrain from designing, adopting, financing, and implementing policies or measures that, directly or indirectly, impair the enjoyment of human rights by future generations.

d) Inter-governmental and supranational institutions, at the global and regional level, should support efforts by States to uphold the rights of future generations including through multilateral cooperation. Such support should include technical cooperation, financial assistance, institutional capacity development, knowledge sharing, exchange of experiences and transfer of technology.

e) International financial institutions and other inter-governmental and supranational institutions must adopt effective measures to protect decision-making processes and spaces from undue corporate influence or corporate capture which nullify or impair the human rights of future generations.

27. Responsibilities and Duties of Individuals and Communities

a) Every person has responsibilities and duties to themselves, their community and society, and to humanity as a whole, including duties to respect and promote the human rights of future generations.

b) Civil society organizations and non-governmental bodies have responsibilities to respect and promote the human rights of future generations.

c) National human rights institutions must have the competence to oversee decisions that may have an impact on future generations. They should incorporate the human rights of future generations in their plans and programs, and should put in place mechanisms to monitor and report on the activities, decisions or policies (and the implementation thereof) by States' authorities which affect the human rights of future generations.

d) The recognition of individual and community responsibilities in no way diminishes the obligations of States to respect, protect, and fulfil or the duties of non-state actors to respect the human rights of future generations.

IV. ACCOUNTABILITY AND REMEDIES

28. Incorporation and Implementation in Domestic Law

States must ensure that the human rights of future generations are effectively incorporated into their domestic law, or otherwise recognized in their domestic legal system.

29. Victims

For the purposes of the present section, victims of violations refer to future generations, including persons, groups, and Peoples, who face a substantial and reasonably foreseeable risk of suffering human rights violations, whether individually or collectively, through acts or omissions of present States and non-State actors. The designation of persons, groups and Peoples subject to such violations as victims in this context refers to their entitlement to hold accountable those responsible for violations of their rights, while affirming their dignity, autonomy and self-determination.

30. Effective Remedies

Everyone has the right to an effective remedy for conduct violating their human rights. To that end, States must:

a) Provide adequate judicial, quasi-judicial and administrative mechanisms for the supervision and enforcement of the human rights of future generations;

b) Investigate, adjudicate, and redress violations of future generations' human rights caused or contributed to by States or private actors;

c) Ensure that victims (and their representatives) have standing before courts and human rights bodies, and take all necessary measures to ensure that representatives are able to enforce the human rights of future generations through the judicial system;

d) Ensure access to justice, including by removing barriers to access and providing appropriate and adequate assistance to victims' representatives;

e) Disseminate, through public and private mechanisms, information about all available remedies for violations of the human rights of future generations;

f) Where the harm resulting from an alleged violation is expected to occur on the territory of a State other than the State where the harmful conduct took place, any State concerned must provide the victims with access to justice, whereas the obligation to provide reparations falls on the States responsible for the harmful conduct.

31. State Responsibility

A State is responsible for the breach of obligations to respect, protect and fulfil the rights of future generations from the moment that it fails to act in conformity with these obligations.

32. Prevention, Cessation, Non-repetition and Redress

States' obligations to respect, protect, and fulfil the rights of future generations include, among others, the obligations to:

a) Take appropriate legislative, administrative and other measures to prevent violations, including the regulation of activities by non-state actors under their jurisdiction;

b) Take effective measures aimed at the cessation and non-repetition of activities that risk harming the rights of future generations; including preliminary measures to prevent harm while remedial procedures are underway;

c) Provide effective guarantees of non-repetition of violations;

d) Provide adequate, effective, prompt and appropriate redress to victims, including reparation, as described below.

33. Full and Effective Reparation

Victims are entitled to full and effective reparation, as laid out in principles 34-36 below, which include the following forms: restitution, compensation, and satisfaction. Reparation for violations of the human rights of future generations should be proportionate to the gravity of the violations and the harm caused by the violation. States, in consultation and cooperation with representatives of victims, must establish national and international programs for reparation for violations of the human rights of future generations.

34. Restitution

Restitution should be aimed at restoring the ability of victims to enjoy their human rights to the greatest possible extent. It should be informed by the best available scientific evidence, as well as Indigenous Peoples' and traditional knowledge, by precaution, and the participation of victims' representatives. Restitution includes, as appropriate: restoration of degraded ecosystems and means of subsistence and development, return of land, territories, resources, and other property, and means to identify, restore, revitalize and transmit cultural heritage.

35. Compensation

Appropriate compensation must be provided for any damage that cannot be prevented or repaired, including when restitution is not possible. Compensation may be made in kind, or in the form of monetary compensation committed to victims.

36. Satisfaction

Satisfaction must include, where applicable, any or all of the following:

a) Verification of the facts and full and public disclosure of the truth regarding the causes and conditions pertaining to the violations, including the role and responsibility of non-state actors;

b) Mechanisms to provide victims and their representatives with information on the causes and conditions pertaining to the violations and to learn the truth in regard to these violations;

c) An official declaration or a judicial decision restoring the dignity, status and rights of the victims;

d) Public apology, including acknowledgement of the facts and acceptance of responsibility;

e) Judicial and administrative sanctions against persons liable for the violations;

f) Inclusion of an accurate account of the violations that occurred in national and international human rights law training and in educational material at all levels.

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Annex 551

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Common but Differentiated Responsibilities

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A. Introduction

1 The concept of common but differentiated responsibilities in international environmental law entails that while pursuing a common goal (see also → *Conservation of Natural Resources*), States take on different obligations, depending on their socio-economic situation and their historical contribution to the environmental problem at stake. In particular since the 1990s, the concept has become prominent in international environmental law (see also → *Environment, International Protection*). However, differentiating based on the socio-economic situation of States is not unique to international environmental law; its origins can be traced to the early 20th century. This contribution focuses on the concept of common and differentiated responsibilities in international environmental law, while briefly considering its early origins.

2 Article 405 (3) Versailles Peace Treaty (→ *Versailles Peace Treaty [1919]*) constitutes an early expression of the concept. It is identical to current Art. 19 (3) Constitution of the International Labour Organization (→ *International Labour Organization [ILO]*), which provides that in framing labour conventions or recommendations due regard shall be given to 'those countries in which climatic conditions, the imperfect development of industrial organization, or other special circumstances make the industrial conditions substantially different' (see also → *Labour Law, International*). Such conditions may provide a basis for modifying the general rules formulated in an ILO convention or recommendation and some ILO conventions implement Art. 19 (3) ILO Constitution by way of exceptions that a State Party may claim based on insufficient development of its economy or relevant social infrastructure (eg Art. 7 Convention No 183 concerning the Revision of the Maternity Protection Convention). Moreover, international trade law has since the conclusion of the General Agreement on Tariffs and Trade ('GATT') in 1947, recognized the special position of → *developing countries* in Art. XVIII GATT (→ *General Agreement on Tariffs and Trade [1947 and 1994]*). This special position has found broader reflection in the amended Art. XVIII GATT and in Part 4 GATT, included in 1965, as well as in the Marrakesh Agreement Establishing the World Trade Organization ('WTO Agreement'). Within the → *World Trade Organization (WTO)*, the differential treatment of developing States, besides facilitating → *technical assistance* and capacity building, entails that → *reciprocity* in mutual trade → *concessions*, an important tenant of international trade law, may be released in the relationship between developing and developed States. Such releases are subject to → *negotiation* between developing and developed States and the resulting preferential treatment is often of limited duration. In addition, the United Nations Convention on the Law of the Sea of 1982 (→ *Law of the Sea*) contains various references to the special position of developing States, especially where fisheries are concerned (eg Arts 61 (3) and 62 UN Convention on the Law of the Sea; see also → *Fisheries, Coastal*; → *Fisheries, High Seas*) and in its Part XI, on the regime of the → *international seabed area*.

3 In international environmental law, the concept of common but differentiated responsibilities is expressed in Principle 12 Stockholm Declaration of the United Nations Conference on the Human Environment and in Principles 6 and 7 Rio Declaration on Environment and Development (→ *Stockholm Declaration [1972] and Rio Declaration [1992]*). It is, moreover, since the 1970s, reflected in the provisions of most multilateral environmental agreements ('MEAs'; → *Environment, Multilateral Agreements*).

B. Content

4 The Rio Declaration currently provides the most generally accepted formulation of the concept of common but differentiated responsibilities. The first sentence of its Principle 6 provides: 'The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority'. Principle 7 Rio Declaration provides:

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

5 These terms point to the core of what constitutes the concept of common but differentiated responsibilities in international environmental law: a global partnership, linked to the duty to cooperate, in which States are to take on different obligations based on their situation, as determined by, in particular, their present (and future) developmental needs, historical contribution to environmental degradation, present contribution to the problem and their access to technological and financial resources. The basis of differentiation in the application of the concept has two components: it consists of a responsibility component which takes account of historical, current, and future contributions to environmental degradation; and a capabilities component, which reflects economic capacities to contribute to environmental protection. The concept links to a number of other environmental concepts, such as → *sustainable development*, inter- and intragenerational equity (→ *Intergenerational Equity*; → *Equity in International Law*), and → *polluter pays*. The concept of sustainable development addresses the need to balance socio-economic considerations (→ *Development, Right to, International Protection*), while the concepts of inter- and intragenerational equity address, respectively, equity across generations and equity among members of a generation. According to the 'polluter pays' concept, it is the person or entity causing the environmental damage that should bear its costs. The interrelationship between these concepts can be characterized as follows: the concept of common but differentiated responsibilities constitutes a means of translating the concept of inter- and intra-generational equity to the inter-State level, the South-North context in particular, with a view to attaining sustainable development by placing responsibility on actors actually causing or having caused environmental degradation.

6 Most MEAs do not explicitly refer to the concept of common but differentiated responsibilities, but instead contain substantive obligations that implement the concept. The United Nations Framework Convention on Climate Change ('UNFCCC'; → *Climate, International Protection*) and the Paris Agreement are exceptions. Article 3 UNFCCC, entitled 'Principles', provides in its first paragraph:

> The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.

In the Paris Agreement, the concept of common but differentiated responsibilities is referred to in several instances. It provides that the parties to the Paris Agreement are guided by the principles of equity and common but differentiated responsibilities and respective capabilities in the light of different national circumstances (Preamble), and that the Paris Agreement will be implemented to reflect these two principles (Art. 2 (2)). The concept must specifically be reflected in the party's nationally determined contribution ('NDC') (Art. 4 (3)) and long-term low greenhouse gas emission development strategies (Art. 4 (19)).

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7 MEAs implement the concept of common but differentiated responsibilities in a variety of ways. Firstly, MEAs may include a grace period for developing States. A pertinent example is Art. 5 (1) Montreal Protocol on Substances that Deplete the Ozone Layer ('Montreal Protocol'), ie the protocol to the 1985 Vienna Convention for the Protection of the Ozone Layer (→ *Ozone Layer, International Protection*). It allows developing States a period of 10 years before they must comply with the general substantive rules of the Montreal Protocol. Secondly, MEAs may provide substantive obligations only for developed and economy in transition States. The Kyoto Protocol to the United Nations Framework Convention on Climate Change ('Kyoto Protocol') provides an example. It requires developed and economy in transition States, and not developing States, to comply with agreed greenhouse gas emission reductions (Art. 3 and Annex A Kyoto Protocol; see also → *Emissions Trading*). Note that the Paris Agreement has moved away from this approach, since it requires all parties to submit NDCs. Thirdly, most MEAs make implementation by developing States conditional on the transfer of technology and financial means from developed States (→ *Technology Transfer*), eg Art. 4 (7) UNFCCC and Art. 20 (4) Convention on Biological Diversity (→ *Biological Diversity, International Protection*). These provisions are to a large degree implemented through so-called financial mechanisms (eg Art. 21 Convention on Biological Diversity and Art. 21 Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa; → *Desertification*), which are linked to the → *International Bank for Reconstruction and Development (IBRD)* (see paras 9–12 below). Fourthly, some MEAs provide special substantive rules for the relationship between developed and developing States. The 1995 amendment to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal banning the transboundary movement of hazardous wastes between developed and developing States provides an example of this approach (Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal 'Decision III/1'; see also → *Hazardous Substances, Transboundary Impacts*; → *Hazardous Wastes, Transboundary Impacts*). Lastly, the → *environmental compliance control* mechanisms that function in the context of most MEAs provide that in the case of non-compliance a State may be offered assistance in order to bring it back into compliance with the agreement (eg Conference of the Parties to the Convention on Biological Diversity 'Decision BS-I/7' para. III (1) (c), establishing the compliance mechanism for the Cartagena Protocol on Biosafety to the Convention on Biological Diversity).

8 During the negotiations of the Paris Agreement, the basis of differentiation in the application of the concept of common but differentiated responsibilities became a contentious issue. During the 1990s when the concept gained prominence, the distinction between developed and developing States in MEAs was largely justified by the pre-existing economic realities in which developing States were regarded as a homogeneous group. By the time of the negotiations of the Paris Agreement, developing States had become an economically heterogeneous group and in some instances their economies had surpassed those of developed States. Developed States thus became increasingly discontented about the static bipolar understanding of the concept of common but differentiated responsibilities anchored in the UNFCCC and the Kyoto Protocol, and argued for the reflection of actual current economic realities in the interpretation of the concept. The qualification 'in light of different national circumstances' that was added to each and every articulation of the concept in the Paris Agreement is thus to be understood as a compromise between developing States—who were adamant to maintain the status quo of the UNFCCC—and developed States—who wished the changing economic capabilities of developing States to be reflected in the Agreement. To move away from basing the concept of common but differentiated responsibilities on a pre-determined and static dual classification of developing and developed States and qualify the concept on the basis of the actual current

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circumstances of the parties gives the concept a dynamic, adaptable, and flexible character. The main operationalization of this shift of approach occurs in the mitigation pillar of the Paris Agreement. Here, climate change mitigation is based on a system of self-differentiation in which the parties to the Paris Agreement set their own NDCs. The Paris Agreement should, however, not be understood as a radical deviation from the bipolar differentiation of responsibilities in the UNFCCC and the Kyoto Protocol. For example, pursuant to Art. 4 (4) Paris Agreement, developed States are to take the lead in absolute emission reduction targets, while developing States should—for now—continue to enhance mitigation efforts and are only encouraged to strive—over time—for an economy-wide emission reduction.

C. Institutional and Decision-Making Structure

9 The concept of common but differentiated responsibilities is at the source of the complex institutional and decision-making structure of international environmental law. At the basis of this structure are the various MEAs and in particular their provisions that require the transfer of technology and financial means and the establishment of financial mechanisms for this purpose. This transfer to a large extent takes place through funds linked to the IBRD such as the → *Global Environment Facility (GEF)*, which functions as the financial mechanism for most MEAs. In addition, the IBRD and the GEF itself also administer other funds that contribute to the implementation of MEAs, such as the UNFCCC. Relevant examples are the Climate Investment Funds, the Carbon Partnership Facility, and the Least Developed Country Fund. Due to this manner of proceeding, the IBRD and the GEF are in a position to play a coordinating role in international environmental law, especially in the South-North context.

10 Based on decisions taken by the conferences of the parties ('COPs') of MEAs competences have thus been attributed to the IBRD and funds linked to the IBRD (eg Conference of the Parties to the Convention on Biological Diversity 'Decision I/2', identifying the GEF as the [interim] financial mechanisms for the Convention on Biological Diversity; see also → *Conference [Meeting] of States Parties*; → *Environmental Treaty Bodies*). As a result, a shift in decision-making patterns has taken place: from the one-State-one-vote and in practice mostly → *consensus* decision-making pattern prevalent in MEAs, to the weighted voting system employed in the IBRD or to the various decision-making patterns employed in the funds (see also → *International Organizations or Institutions, Voting Rules and Procedures*). On most of the governing bodies of the funds, including the GEF, donor and recipient States are now equally represented.

11 MEAs themselves also administer funds. The Montreal Protocol, for example, administers the Multilateral Fund for the Implementation of the Montreal Protocol ('Montreal Fund'), which is used to finance ozone reduction–related projects in developing States, and the Adaptation Fund, which is designed to support implementation of the Kyoto Protocol, was administered within the climate change regime. The World Heritage Fund occupies a similar position in relation to the Convention for the Protection of the World Cultural and Natural Heritage of 1972 (→ *Cultural Heritage*; → *World Natural Heritage*).

12 This complex institutional and decision-making structure has given rise to a body of norms and decision-making patterns, which, especially due to the large scale involvement of international institutions, qualify as international administrative law (see also → *Global Administrative Law*). Within this body of law, international institutions exercise decision-

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making powers that can be characterized as of a public law nature. Decisions taken by COPs, IBRD, GEF and various funds referred to in this section provide examples.

D. Rationale

13 As mentioned above, the concept of common but differentiated responsibilities can be understood as a translation of the concept of intragenerational equity to the inter-State level. At that inter-State level it signals a move away from the consequences associated with the formal equality of States, a prominent assumption in the traditional doctrine of international law (→ *States, Sovereign Equality*). Formal equality entails that *de iure* all States are assumed to be equal and subject to the same rights and duties, regardless of their socio-economic characteristics. This assumption meant that international law did not play a significant role in decreasing, or even maintained the *de facto* inequalities between developing and developed States. During the 1970s, these inequalities resulted in claims for the establishment of a → *New International Economic Order (NIEO)* on the part of developing States. While the NIEO never emerged, the articulation of environmental problems as of common concern provided developing States with an opportunity to voice their demands regarding a more equitable international legal order and assistance from developed States (see also → *Developing Country Approach to International Law*). These demands, as is illustrated by the concept of common but differentiated responsibilities, have resounded in international environmental law.

14 There is, however, another side to the story of the concept of common but differentiated responsibilities. This side of the story concerns the manner in which it has been implemented, with a focus on incremental costs and conditionalities attached to the economic benefits that developed States may obtain as a result of certain mechanisms that implement the concept.

15 The notion of incremental costs entails that developed States, through the GEF, contribute to the extra costs that developing States incur when they contribute to the protection of the global environment through the implementation of MEAs. In other words, a developing State that plans to undertake a project for national benefits may request funding from the GEF for purposes of transforming that project into a more environmentally friendly project with benefits for the global environment. An example would be the transformation of a national power generation project from a coal to a gas-based energy project, where the transformation would be eligible for GEF funding. Payment thus is not for the protection of the environment in developing States, even though that is to be a most likely effect of such a project, but for the protection of the global environment from which developed States also profit.

16 The transfer of financial means and technology, furthermore, is conditional upon developing States meeting standards set out in MEAs and especially in the decisions subsequently adopted by COPs to MEAs and by the decision-making bodies of the various funds referred to above.

17 In addition, developed States and the private sector in developed States may obtain economic benefits from projects that support implementation of MEAs in developing States based on the concept of common but differentiated responsibilities. Cases in point are projects implemented on the basis of the flexible mechanisms of the Kyoto Protocol, such as projects undertaken under the → *Clean Development Mechanism*, in which private sector actors are entitled to participate. In this case, developed States and the private sector in developed States may pursue economic profit by obtaining cheap emission reduction units through carbon reduction projects in developing States. These units may be used by developed States to meet their targets under the Kyoto Protocol or can be sold at a profit on the global carbon market. It is envisaged that market-based mechanisms, in addition to

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non–market-based mechanisms, will continue to play a role in the implementation of the Paris Agreement.

18 These elements in conjunction with the institutional setting set out above have led some commentators to suggest that sustainable development and the notion of common but differentiated responsibilities as well as other elements of contemporary international (environmental) law have enabled the continued subordination of developing States to the will of developed States and international institutions in which developed States have a major say.

E. Legal Status

19 The concept of common but differentiated responsibilities clearly has normative implications, ie implying commitments, possibly duties, on the part of developed States vis-à-vis developing States. The concept, however, is unlikely to qualify as a rule, given that it cannot apply in an all-or-nothing fashion. It is thus more likely to qualify as a principle. Whether it has legally binding status as a principle is more difficult to determine as it is not an explicit element of the texts of most MEAs, even if these MEAs provide means of implementing the principle (see paras 6–7 above). Within these MEAs, the parties are legally bound by the norms, rules, or principles formulated to implement the concept of common but differentiated responsibilities. In terms of general international law, the concept of common but differentiated responsibilities, then, is most likely to qualify as a principle of international environmental policy or → *soft law* that has had a profound effect on international environmental law, both on its substance and on its institutional structure (see also → *General International Law [Principles, Rules and Standards]*; → *General Principles of Law*). The UNFCCC and the Paris Agreement are the exceptions to the above. Within the climate change regime, the concept of common but differentiated responsibilities qualifies as a legally binding principle given its explicit inclusion in both instruments. Noteworthy in this respect is that in the *Netherlands v Urgenda* case, both the Hague Court of Appeal and the Hoge Raad (the highest court and a court of cassation in the Netherlands) took into account the concept of common but differentiated responsibilities in committing the Netherlands to attain a 25% reduction of greenhouse gas emissions by 2020, compared to 1990, based on the duty of care that it owes citizens pursuant to Arts 2 (Right to life; → *Life, Right to, International Protection*) and 8 (Right to respect for private and family life; → *Privacy, Right to, International Protection*; → *Family, Right to, International Protection*) European Convention for the Protection of Human Rights and Fundamental Freedoms ('ECHR'; → *European Convention for the Protection of Human Rights and Fundamental Freedoms [1950]*). This was the first occasion on which the concept of common but differentiated responsibilities played a role in the interpretation of greenhouse gas emission reduction obligations under the climate change regime by a national court.

F. Evaluation

20 The concept of common but differentiated responsibilities has affected international environmental law, and perhaps also international law in general, in a fundamental manner. It has altered the discourse by changing the nature of what are considered to be valid arguments. Most importantly it has given developing States a basis for claiming that their position is to be taken into account in the formulation of treaty regimes. Moreover, it has given developing States a basis for pursuing the position that they will not accept or will only accept minimal obligations unless developed States transfer funds and technology to them. In terms of the protection of the environment one might argue that this development has come at a price: economic, in addition to ecological, considerations figure prominently in negotiations. This is true both for developed and developing States. It also means that environmental problems are being recognized for what they are: problems that if they are

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to be addressed require a fundamental restructuring of economic and social relations at local, national and global levels. Such considerations of course do not make the negotiations any easier as was illustrated by the negotiations for the Paris Agreement. However, these negotiations also show that the concept of common but differentiated responsibilities is adaptable and can be instrumental in achieving agreement to collectively move forward, even in very contentious environmental policy areas.

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Annex 552

P. Cullet, *Common but differentiated responsibilities*, in RESEARCH HANDBOOK ON INTERNATIONAL ENVIRONMENTAL LAW, Fitzmaurice et al. (2020)

9. Common but differentiated responsibilities

Philippe Cullet

9.1 INTRODUCTION

Equity has been a central concern in international environmental law since the 1970s. At the Stockholm Conference in 1972, states already agreed that there was a need to take into account the 'circumstances and particular requirements of developing countries' and called for 'additional international technical and financial assistance' to ensure the availability of sufficient resources for protecting the environment (Stockholm Declaration, 1972). Two decades later, the Rio Declaration was much more specific and included two equity-related principles. Principle 6 recognized the need to consider the special situation of developing countries while Principle 7 provided the policy context for taking measures based on the division of the world into developed and developing countries. It reads as follows:

> States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command. (Rio Declaration, 1992)

This principle of common but differentiated responsibilities (CBDR) formalized at Rio in 1992 quickly became a pivotal principle of international environmental law. Conceptually, it reflects equity concerns in a world marked by high inequalities in levels of human development and environmental resilience. This paves the way for redistributive measures that are at the core of differential treatment (Cullet, 2003). In practice, CBDR has provided the basis on which the special situation of global South countries has been taken into account in environmental treaties. This has taken the form of a series of differential measures structured around a division of the world in two groups of countries, developing and developed countries.

CBDR has led to challenging one of the most cherished bases of international law, that of the reciprocity of obligations linked to the formal equality of states. This is what gives CBDR its potential to foster change and also explains the opposition from some countries. Yet, in practice, the success of CBDR, as measured in terms of the number of differential measures adopted in international environmental law, is linked in large part to much more pragmatic considerations. Indeed, particularly in the case of global environmental issues, the global South has been able to a certain extent to negotiate its participation in international agreements. This was, for instance, the case of the treaties addressing the ozone layer hole where the global North was the main contributor to a problem affecting it in the first place but a problem that could not have been solved without participation of the global South.

This chapter is divided into three sections. The first section examines the conceptual framework underlying the development of CBDR and the progression in international law from judicial equity to differentiation in norms. The second section moves on to examine the

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different instruments of differentiation in international environmental law, from its basis in the principle of CBDR to specific differential tools used in legal instruments. It also considers the question of who the beneficiaries of differentiation should be in a context where the amorphous category of 'developing country' has shown its limits, and it examines the legal status of CBDR and differentiation. The last substantive section considers the place and continued relevance of differential treatment and the principle of CBDR in a rapidly evolving world. It considers developments and challenges in the climate change regime that have attracted significant attention, looks at the relevance of CBDR in environmental law and beyond and looks at avenues to rethink CBDR to effectively address global environmental issues at the global level.

9.2 EQUITY IN INTERNATIONAL ENVIRONMENTAL LAW

Contemporary international environmental law developed from the 1970s partly in response to concerns about environmental degradation. Yet, because environmental protection is intrinsically linked with the use of environmental and natural resources, livelihoods and the realization of human rights, the necessity to adopt a broad view of environmental regulation quickly became apparent. Fairness, equity and justice have thus always been of great importance in environmental law.

At the outset, it is necessary to distinguish between compassionate measures and environmental justice. The former is based on the idea that some countries need to be helped because they suffer specific disadvantages. This is not rooted in any sense of obligation, but rather in altruism. Indeed, development aid, such as financial aid or technology transfer, can largely be seen as a measure of benevolence since no obligation to provide aid has developed in international law. This would generally correspond with Rawls' idea of a duty of developed countries to help other countries (Buchanan, 2004). This may imply transfers of food or funds but it neither implies any structural changes in the international order nor grants the global South a right to request such aid.

The latter is based on the perception that justice is a compulsory part of international environmental law, not an optional addition (Gonzalez, 2015). The central role of justice in environmental law derives from the basic fact that life – and human life in particular – is impossible without a clean environment. There is therefore an intrinsic relationship not only between environmental protection and justice but also between the conservation and sustainable use of resources, such as water or agricultural biodiversity, and human survival. This confirms that justice and fairness are particularly important in an environmental context. Yet, the argument is much broader insofar as there would be no legitimacy for an international law that is not built on principles of justice (Buchanan, 2004: 215). Given historical and present distribution of resources and power, a form of distributive justice is thus an essential part of international law and international environmental law in particular (contra Rawls, 1999: 114).

Justice can be realized in a variety of ways. At the international level, the fiction of equality of states as a basis for interstate relations conditioned thinking about equity for a long time. Yet, in recent decades, there has been increasing recognition that formal equality is insufficient to foster equity. This leads to the consideration of substantive equality as an alternative route to ensure equity.

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9.2.1 Equity through Formal and Substantive Equality

International law has been based for centuries around the idea that rules are deemed to be just if they apply to all states similarly. This is based on an understanding of the world organized around the legal equality of states as the appropriate basis for realizing fairness. At the same time, this implies that existing inequalities are not taken into account in the structuring of legal norms.

The idea of formal equality has been applied between individuals and states. It generally provides that all subjects of the law are to be treated similarly with an ultimate aim of fostering a society where resources are distributed so as to maximize aggregate welfare (Young, 1994). A strict application of the theory of formal equality posits that a right is justly acquired as long as it was acquired according to the rules in force at the time of acquisition (Nozick, 1974). Under this entitlement theory, existing patterns of wealth are grandfathered, unless goods were acquired illegally under the laws prevailing at the time of acquisition. Interestingly, upholding existing inequalities has been widely condemned as being counterproductive even by utilitarian standards, since there is little incentive to encourage productivity while essential commodities are denied to the majority (Franck, 1995: 151). The Rawlsian theory of justice constitutes a less extreme application of justice based on formal equality. While Rawls accepts the inevitability of inequalities in the basic structure of societies they are only permissible when they contribute to the long-term expectations of the least fortunate group in society (Rawls, 1972: 7, 151).

At the international level, the principle of formal equality translates into the notion of sovereign equality of states, which constitutes a cornerstone of international law (UNGA, 1970). Historically, the neutrality of the law was premised on the legal equality of all states with the consequence that treaties were traditionally deemed to provide for reciprocity of obligations amongst contracting states. Here, reciprocity implies that states accord each other similar benefits (Craven, 2005). One of the attributes of formal equality is that every member of the community gets equal opportunities. Internationally, this conception translates, for instance, into the notion that states have the right to take any amount of shared common resources on a first-come, first-served basis (Brown Weiss, 1993). This is theoretically appealing but in practice tends to allow states having the most advanced technological capacity to appropriate a disproportionate share of the resources while less technologically advanced states benefit less despite the status of such resources as *res communis*. In the case of deep seabed resources where advanced technology is required for the exploitation of these resources, formal equality would privilege states that can make better use of the opportunities offered.

A justice system based on formal equality can produce an optimal aggregate outcome, such as a high rate of overall economic growth, but tends to overlook the welfare of disadvantaged individuals. In fact, equality of rights or opportunities does not necessarily bring about equality of outcomes. This is especially relevant in a world characterized by significant disparities in resources and capabilities, between individuals and between states. Accordingly, even if the international community adopts a system built on the rule of law, in which the weak and strong are treated equally and where all have a chance to benefit from an open, market-based, global economy, the least favoured will continue to be relatively disadvantaged. One of the justifications for focusing on formal equality is that the existence of rules that apply similarly to all individuals is best suited to ensure stability and foreseeability. Yet, this does not hold in

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the face of severe inequalities that still characterize the North–South divide when looking at the gap between countries with very high and very low human development (UNDP, 2020).

An alternative basis to rules that apply similarly to all is to provide that like cases be treated alike and that dissimilarly situated people be treated dissimilarly (Hart, 1994: 159). This is based on the principle of distributive justice, according to which relevant dissimilarities between subjects of the law warrant special attention or special treatment (Aristotle, 1991). In this view, the realization of substantive equality implies that existing inequalities, such as inequalities in wealth or natural endowments, should be acknowledged and taken into account. In the context of the current international community, this may preclude reliance on the theory of the veil of ignorance advocated by Rawls (Rawls, 1972: 12). Indeed, Rawls' veil of ignorance implies that members of the community do not know whether their society will be a developed or a developing country (Rawls, 1999: 33). However, given the existing distribution of resources and wealth across the world, the choice between being born in a developed or a developing country may well be more significant than arrangements within a given society (Barry, 1973: 129).

Contractarian principles may also prove misplaced at the international level because they are usually developed for national societies and do not imply redistributive obligations between persons situated in different societies (Beitz, 1985: 286). In other words, an enquiry into matters of equality cannot be based exclusively on theoretical preferences but must relate to existing realities. Further, discrepancies that cannot be traced to individuals' choices should be taken into account and may constitute grounds for redistributive claims.[1] This is true both in the case of a country lacking primary natural resources and in the case of an individual born without wealth.

Overall, since inequalities witnessed in the real world occur, in large part, independently of people or states' actions, the necessity arises to devise exceptions, which take into account some existing inequalities to bring about substantively equal results. As Sen recalls, this is a difficult task since 'The demands of substantive equality can be particularly exacting and complex when there is a good deal of antecedent inequality to counter' (Sen, 1992: 1). The development of differential treatment in international environmental law confirms this prognostic.

9.2.2 Rationale for Differential Treatment

Differential treatment can be based on two separate but related conceptions of justice: corrective and distributive justice. Corrective justice posits that wrongs must be compensated by the wrongdoer (Brilmayer, 1996). The wrong and the compensation need not be identical and this opens the way for a broader understanding of measures that go beyond simple retribution. A first justification for corrective justice in favour of the global South is the harm done to countries that were earlier colonized, for instance, in terms of exploitation of their environmental resources for the benefit of the metropoles (Ferguson, 1987). In an environmental context, the temporal dimension of corrective justice can, for instance, be applied to climate change, given the long-term impacts of greenhouse gas emissions. The corrective justice argument is linked to the fact that a limited number of countries historically contributed most of the build-up of harmful gases responsible for ongoing climate change (cf. Prost and Camprubi, 2012: 392). The historical argument can be extended to a broader point, which puts forward the need for compensation on the basis that different states have made or make different contributions to

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the creation of environmental problems. Yet Principle 7 of the Rio Declaration fails to emphasize historical responsibilities (Lavallée, 2010: 59).

Distributive justice goes beyond corrective justice insofar as it is not limited to compensating acknowledged harm but also seeks to identify whether the existing distribution of entitlements and resources is appropriate to ensure substantive equality. Relevant dissimilarities between subjects of the law may warrant special treatment, which can take the form of a redistribution of entitlements or resources. There has been a long-standing debate as to whether distributive justice can justifiably be given a role in international law. Some argue that redistribution is not desirable, even as an ideal, because states are better off being self-reliant (Brilmayer, 1996: 618). Yet, despite such reservations, it is unthinkable to justify international law without a distributive justice component (Buchanan, 2004: 193). The reason for the controversial nature of the inclusion of distributive justice in an international law framework is that it justifies the redistribution of resources from rich to poor countries or in an environmental context the redistribution of resources from countries having caused more environmental degradation or countries having the technological or financial capacity to address environmental degradation.

At the international level, there is no institution that is capable of enforcing redistribution on the more powerful and richer countries. Yet, such redistribution remains necessary in a highly unequal international society made of small and poor countries as well as big, powerful and rich countries. There are numerous situations where states have acknowledged the need for redistribution, for instance, through development aid or technology transfers, but this has not easily translated into legally binding long-term commitments.

9.2.3 From Judicial Equity to Differential Treatment

The shortcomings of formal equality as a tool to achieve just results have been recognized for a long time. The first answer given was for judges to use equity considerations in taking decisions in individual cases based on formally equal rules (Akehurst, 1976). In this instance, the idea is to avoid results that are undesirable according to broader justice, moral or social concerns (*Georges Pinson (France) v. United Mexican States*, 1928: 355). This approach excludes permanent exceptions to rules but provides remedial measures to the potentially harsh consequences of the application of a rule of law applying to all in a similar way.

Judicial equity can be an appropriate solution when inequalities between states are not so significant as to make a system based on formal equality inappropriate. Further, there should be a fully fledged judicial system in place to address the various situations where a specific case of application may not lead to fair results. This does not obtain in practice. Firstly, the relative cohesion of the international community of states that may have existed until the middle of the twentieth century was shattered by the accession to statehood of many formerly colonized nations. Secondly, recourse to the courts at the international level is relatively infrequent, particularly in an environmental context, and cannot be a substitute to a rule-based framework that fosters fair results in most cases of application.

This led to the introduction of preferential measures seeking to achieve substantive equality at the level of norms. Preferential, or differential, treatment refers to instances where, because of pervasive differences or inequalities among states, formal legal equality and reciprocity are sidelined to accommodate extraneous factors (Byers, 1999: 90). These include divergences in levels of economic development, different contributions to the creation of a problem or unequal capacities to tackle existing problems. At the same time, differential treatment does

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not encompass every deviation from the principle of sovereign equality but refers only to non-reciprocal arrangements that seek to foster substantive equality. In practice, this mainly includes deviations that seek to favour least favoured states, usually equated with developing countries and, in some cases, least developed countries.

9.3 CBDR: DEVELOPMENT AND IMPLEMENTATION

Differential treatment in international environmental law builds on a series of measures adopted following decolonization in the broader of field of development to take into account the structural inequalities between what became known as developed and developing countries. The growth of what was then known as 'preferential treatment' reflected the incapacity of a legal framework based on the legal equality of states to effectively take into account inequalities, such as in the field of economic development.

A number of preferential treatment measures were adopted from the 1950s onwards, as in the case of an amendment to the General Agreement on Tariffs and Trade (GATT) that granted permission to developing countries with low standards of living to derogate from some of the obligations that applied to all other members (General Agreement on Tariffs and Trade, 1947: Article XVIII). This eventually coalesced in the 1970s into a broader call for a new international economic order (NIEO), reflected in a series of UN General Assembly resolutions seeking to create rules of international law meeting the specific needs of developing countries based on their different levels of economic development (UNGA, 1974: § 4(p)).

The call for an NIEO led to a broader realization that the principle of formal legal equality could be not upheld in all situations among states that are unequal in many respects. At the same time, this did not lead to any significant changes in the structure of international law, partly because the push came mostly from developing countries, with developed countries resisting the proposals (Virally, 1983: 326), and partly because, in the 1980s, developing countries found themselves battling what came to be known as the lost development decade. By the 1990s, developed countries had managed to retake the initiative in the context of the Uruguay Round of trade negotiations that led to the setting up of the World Trade Organization (WTO) in 1995 on the basis of a return to formal equality as the preferred principle in international trade law (Michalopoulos, 2000).

Interestingly, while preferential treatment in the international law of development came under sustained attack, specific conditions saw the rapid growth of international environmental law being linked to the development of new forms of preferences for the global South. One of the triggers was the emergence of global environmental problems that first became of concern in the global North but could only be effectively addressed with the cooperation of the South. The development of differential treatment in international environmental law was thus substantially different from preferential treatment in the era of the international law of development. The premise was not mainly the claims of the global South for a more equitable international law but also a confluence of interests between the global North and the global South.

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9.3.1 The Principle of CBDR as a Basis for Differential Measures

The principle that underlies differential treatment in international environmental law finds its most common expression in Principle 7 of the Rio Declaration quoted above. CBDR reflects the equity concerns of UN member states in the environmental sphere. It is built on a twin foundation of partnership and equity. Principle 7 first emphasizes the duty of all states to cooperate to ensure the conservation, protection and restoration of the global environment. States are thus called upon to participate in regimes that seek to address the health and integrity of the Earth's ecosystem, or in other words, global environmental issues.

The second element focuses on the different contributions to global environmental degradation that developed and developing countries have made over time and up to the present day. Principle 7 thus contains both aspects of intra-generational equity and inter-generational equity. It is on this basis that common and differentiated responsibilities are recognized. This twin recognition of a common but distinct responsibility for global environmental issues seeks to balance the need to address the underlying environmental problems while reflecting equity concerns. It is a positive but limited step since the principle fails to indicate whether one prevails over the other.

The third element of Principle 7 focuses on the responsibilities of developed countries and shifts the discussion towards sustainable development. It recognizes the special responsibility of developed countries that have harmed the global environment more and have at their disposal much more significant technological and financial resources to tackle these problems. In other words, under Principle 7 developed countries have to bear a disproportionate share of responsibility, but this is framed more towards the future than as historical responsibility (Bartenstein, 2010: 187). The text provides for acknowledgment of the different capabilities of different countries. Yet, it stops short of directly holding developed countries legally responsible for global environmental damage and does not offer an obligation of compensation for damage to the environment, as suggested in one of the draft versions of the principle (UN, 1991).

CBDR as defined in the Rio Declaration does not specify the types of environmental issues that fall within its scope and it thus has the potential to apply to a wide range of issues. It does, however, emphasize global environmental problems and lends itself particularly well to application in the case of climate change. In this case, there was at the time of the negotiation of the United Nations Framework Convention on Climate Change (UNFCCC) a clear correlation between levels of economic development, and historical and present contributions to climate change that generally coincided with the division of the world into the two categories of developing and developed countries. This contributed to the overall framing of CBDR around an opposition between the two groups of countries. This simple dichotomy was never sufficient to reflect the complexity of the world. This has become more pronounced over time as some global South countries have become major contributors to global environmental harm. In this context, the lack of specificity of Principle 7 in terms of categorization of countries is positive, since it leaves space for moving beyond a simple dichotomy between the global North and global South (cf. Pauwelyn, 2013: 41).

The principle of CBDR is found in a number of legal instruments besides the Rio Declaration. It holds, for instance, a central place in the UNFCCC where it is one of the basic principles on which the whole regime is based.[2] In addition to being a basic principle of the Convention, CBDR also underlies the main commitments that member states take since it

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provides the context for all commitments taken (UNFCCC, 1992: Article 4.1). CBDR was also specifically restated in the context of the compliance regime instituted under the Kyoto Protocol. Indeed, with regard to the Facilitative Branch, CBDR was the principle that guided it in its general 'advice and facilitation' function and in the 'consequences' it applies (Decision 27/CMP.1, 2005: paras. IV and XIV).

CBDR has also been restated in the 2001 Stockholm Convention, which includes in its Preamble a specific restatement of CBDR (Stockholm Convention, 2001: Preamble). Similarly the 2013 Minamata Convention's Preamble specifically singles out CBDR (Minamata Convention, 2013: Preamble). CBDR has also been integrated in treaty regimes where the original instrument did not mention it, as in the case of the 1987 Montreal Protocol where it is explicitly mentioned in later decisions of the Meeting of the Parties (Decision XVI/7, 2004). Various soft law instruments also restate the principle, such as in the case of the plan of action of the 2002 World Summit on Sustainable Development (WSSD, 2002: para. 75), and the outcome document of the Rio+20 Conference, which reaffirmed the Rio principles, among which the only principle singled out is CBDR (UNGA, 2012: para. 15).

9.3.2 Forms of Differential Treatment

Differential measures in international environmental law have taken various forms over the years (cf. Voigt, 2014: 53). These include situations where commitments are explicitly or indirectly different. This may be based explicitly or implicitly on CBDR. These also include differences concerning the ways in which similar or different commitments are to be implemented, as well specific differential tools, such as implementation aid and technology transfer.

The first type of differentiation is where norms are strictly differential norms, namely where different countries take on different commitments. This was, for instance, the case under the Kyoto Protocol, where Annex I countries took on emission reduction commitments while developing countries did not take on similar commitments (Kyoto Protocol, 1997: Article 3). Differentiation can be also be reflected in provisions that make developing countries' implementation of their commitments conditional upon developed countries' fulfilment of their pledges concerning financial aid and technology transfer (Convention on Biological Diversity (CBD), 1992: Article 20.4). In effect, commitments that developing countries make only become operative after developed countries comply with their own commitments.

Another type of differentiation is the frequent use of contextualization of commitments. This may concern binding provisions that are qualified with statements allowing member states to take into account their 'particular conditions and capabilities' or to implement certain obligations 'as far as possible and as appropriate' (CBD, 1992: Articles 6, 7). Contextualization introduces an element of flexibility giving states some discretion in deciding how to implement their commitments. This allows all countries to sign up to the same commitments while being aware that not all countries have the same capacity to implement the obligations they take on. It therefore contributes to making treaties both more widely acceptable and more widely ratified,[3] therefore strengthening the broader architecture of environmental law. At the same time, the flexibility built into contextualization has been criticized by some, arguing that this threatens the certainty of the legal framework (Akehurst, 1976: 809). There is indeed a level of uncertainty that seems to be introduced on a superficial reading of such provisions. However, they must be read together with financial provisions and other support measures that are included to ensure that developing countries are in fact able to deliver on their commit-

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ments to an extent that may not match the efforts of developed countries but ends up being at least comparable.

Differentiation is also much in evidence at the level of the implementation of commitments. Implementation aid for developing countries has become a standard component of environmental treaties (Xiang and Meehan, 2005). Implementation aid is less controversial than differential commitments because aid is never promised on a permanent basis, hence is always subject to periodic renegotiation. While aid may never be provided to the extent desired by recipient states or to the extent necessary to address the environmental issues at stake effectively, it constitutes a concrete differential measure. In principle, the same could be said about technology transfer, often linked to aid commitments, that has been one of the key demands of developing countries for decades. In some cases, as in the ozone layer regime, technology transfers have indeed been central to the success of the regime (Fahey, 2013). At the same time, technology transfer remains in general terms one of the great unfulfilled promises of 'development' and the frequent occurrence in environmental treaties of technology transfer provisions masks an overall limited implementation of such provisions (WTO, 2013).

Thirdly, differentiation can intervene at the level of procedural arrangements. In particular, delayed implementation for developing countries has been used as a way to agree on commitments that are similar for all countries but are implemented in a staggered manner. This constitutes an alternative way to foster broader ratification of a given treaty. This worked particularly well in the context of the ozone layer regime, where developing countries were given additional time to switch to non-ozone depleting substances (Montreal Protocol, 1987: Article 5.1), with aid and technology transfer constituting a central component of this longer transition.

9.3.3 Beneficiaries of Differentiation: Development Indicators and Beyond

Differentiation has generally been structured around a simple dichotomy dividing the world between developed and developing countries. This has the advantage of building on a well-known categorization that is often based on self-identification and thus reduces the scope for disagreements concerning the identification of beneficiaries.

In terms of environmental agreements, the use of an economic development criterion proved to be a relatively good starting point in the first place. At the point at which some of the main international agreements were being negotiated, there was in general terms a good correlation between the contribution to environmental problems and levels of economic development. This was, for instance, the case with ozone depleting substances at the point at which the international legal regime to address the ozone layer hole was negotiated.

Yet, several reasons militate in favour of a different approach. Firstly, the division of the world into two amorphous categories fails to capture the great diversity of situations within each category. This is particularly problematic with regard to the category of 'developing countries', which not only includes a vast majority of the world's countries but also includes countries as different as China and Vanuatu, which have little in common beyond being both formally classified as developing countries (UNDESA, 2021: 126). In fact, the impossibility of structuring the world in such simplistic ways is already often acknowledged. A category often used in development policy is that of least developed countries, which currently singles out 47 countries that are particularly weak in (economic) development terms (UNCTAD, 2020). Other categories used regularly include those of small island developing states and

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landlocked developing countries. Some of these categories find reflection in environmental law agreements. Thus, least developed countries are regularly mentioned in preambles (CBD, 1992: Preamble; Convention to Combat Desertification, 1994: Preamble). They are also mentioned in several treaties in provisions concerning aid or technology transfer, where developed countries are admonished to give them particular attention (Minamata Convention, 2013: Articles 13.4, 14.3; Stockholm Convention, 2001: Article 13.4). In addition, the Desertification Convention singles out least developed countries among the broader group of affected developing countries (Convention to Combat Desertification, 1994: Article 3.d). Yet, when it comes to structuring legal obligations in a differential manner, as in the case of the Kyoto Protocol, there is no mention of least developed or any other subcategory of developing countries.

The lack of subcategories in structuring differentiation has been a problem from the outset. It has become more serious in the past couple of decades in a context where some large developing countries have seen their economic fortunes vastly improve while the gap in levels of economic development between the majority of small developing countries and developed countries has remained relatively stable (UNDP, 2020). In addition, the identification of a country as developed or developing can be controversial since there is no grey zone in between. This is, for instance, illustrated by Kazakhstan's failed attempt to be listed in Annex I of the Framework Convention and to be added to the list of parties with emission reduction targets under the Kyoto Protocol (Castro, 2016: 381).

The first step that can be taken is to break down the two traditional categories. This is, for instance, what the UN has been doing in terms of apportioning expenses for peacekeeping activities by introducing ten categories of countries (UNGA, 2018b). Identifying smaller groups of states is a first positive step. At the same time, there is no conceptual obstacle to removing categories of states altogether. Indeed, with fewer than 200 UN member states, it is easy to consider the individual situation of each and every state. This is in fact what has been done for many years in terms of assessing member states' contributions to the UN. This has been done according to a scale of assessment where each state is classified mainly according to its capacity to pay (UNGA, 2018a).

Addressing each state's own situation would be a first step in tackling one of the shortcomings of existing differentiation, in which allowing China or Saudi Arabia to get the same preferences as Tuvalu in the context of the climate change regime provides ammunition to detractors of differentiation. Yet, the real issue is that differentiation in environmental law should not be based on economic criteria, but on environmental ones. Factors that could be taken into account include the importance of a country in the use or conservation of certain environmental or natural resources or a country's importance in addressing a certain environmental issue.

Some limited attempts to use environment-related categories have been made. These include differentiating countries based on their importance in the production and the use of timber (International Tropical Timber Agreement, 2006: Article 10). In the climate change regime, vulnerability to climate change was introduced as a category in the Convention. It has, however, not been used as a legal basis for determining emission reduction commitments and is still seen as a subcategory of the broader group of developing countries. Further, the case of 'vulnerability' confirms that any categorization is open to being misused and must therefore be defined quite precisely. In the case of the climate change regime, vulnerable countries include low-lying and other small island countries, and countries with low-lying coastal, arid

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and semi-arid areas or areas liable to floods, drought and desertification (UNFCCC, 1992: Preamble). Yet, the commitments clause of the Convention also includes the vulnerability of countries that are likely to lose out from a global shift away from fossil fuels (UNFCCC, 1992: Article 4.10). OPEC and other producer countries will potentially suffer economically in the long run from policy changes brought about by climate change but their 'vulnerability' cannot be compared to that of low-lying and other small island countries directly affected by sea-level rises or the overall vulnerability of least developed countries.

The example of vulnerability confirms that environmental criteria would need to be carefully drafted to reflect both environmental and equity concerns. Thus, one of the reasons why the BASIC countries (Brazil, South Africa, India and China) may not be included among the beneficiaries of all differential measures anymore is not so much because poverty has disappeared but more because they happen to be large countries that are much more resilient than other countries at the same level of human development.[4] The Gothenburg Protocol to the Convention on Long-Range Transboundary Air Pollution offers a sense of what such new categories could be by obliging countries whose emissions have more significant impacts on the environment or health to take more stringent action (Voigt, 2014: 67).

Overall, there is an urgent need to rethink the categorization on which differentiation is based because it does not provide an appropriate basis for taking effective and equitable environmental measures and because it contributes to opposition to differentiation in general. There are today few reasons why the BASIC countries should be seen arguing for measures that are justified mostly by the situation of smaller and poorer countries. At the same time, there are good reasons why the division of the world into two broad categories has persisted until now. Indeed, those same small, vulnerable or least developed countries benefit to an extent from the fact that the global South still negotiates as a single bloc insofar as their voice is amplified by the bigger and economically more resilient countries. In addition, it is crucial to remember that a call for rethinking criteria for differentiation should not be confused with a call for making them temporary. The changing situation of the BASIC and a few other countries cannot make us forget that the vast majority of developing countries have not seen their relative position in terms of human development improve significantly in recent decades. Even if this were to change in the future, they would still require differentiation for many years.

9.3.4 Legal Status of CBDR

The principle of CBDR has been included in a number of international environmental instruments and has become an integral part of international environmental law but its legal status as an independent principle remains debated. This is probably unsurprising in a context where the United States was so concerned by the potential legal ramifications of the principle that it attached an interpretative statement to the Rio Declaration indicating that it did not 'accept any interpretation of Principle 7 that would imply a recognition or acceptance by the United States of any international obligations or liabilities, or any diminution in the responsibilities of developing countries' (UNCED, 1992: para. 16).

Scholars have expressed different views concerning the legal status of the principle. On the one hand, Pallemaerts already argued in the mid 1990s that differentiation was emerging as a new general principle of international environmental law (Pallemaerts, 1995: 201). Hey also finds more recently that CBDR is 'most likely to qualify as a principle of international environmental policy' (Hey, 2011). On the other hand, Stone argued in the 2000s that CBDR

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has not 'been elevated to the status of a customary principle of international law' (Stone, 2004; 299).[5] A variety of other positions have been articulated around the principle: Bartenstein argues, for instance, that CBDR has a certain normative value and labels it a structuring principle that plays a central role in the systematization of legal rules (Bartenstein, 2010: 199). On her part, Rajamani finds, on the basis of a review of doctrinal positions, that 'the reluctance to stop short of characterizing this principle as one of customary international law is perhaps justified' (Rajamani, 2006: 159).

On the whole, in common with most principles of the Rio Declaration, there is no consensus in favour of recognizing CBDR as a customary principle. It is, however, unclear whether its legal status as a principle is the most important aspect of CBDR. Rather, its main contribution may lie in mainstreaming the idea that reciprocity of obligations is not the only way to achieve fairness in international law. Indeed, whether CBDR is a customary principle of international law or not, international environmental legal instruments are structured around different forms of differentiation. The pervasiveness of differential treatment is one of the central progressive features of international environmental law and this can be directly linked to the principle of CBDR, which provides the reference point around which differentiation is organized.

9.4 CBDR IN AN EVOLVING WORLD: CHALLENGES AND CONTINUED RELEVANCE

CBDR can be analysed as a legal principle that broadens the understanding of equity in international law beyond formal equality. It is also a reflection of a broader sense of solidarity among states linked to the recognition that global environmental issues can only be effectively addressed through joint action that must reflect states' different contributions to the problem and ability to address it.

Solidarity becomes pragmatic partnership where states with different agendas and different economic trajectories come together to foster a greater environmental good. This, for instance, is what happened in the case of the ozone layer regime. Addressing the ozone layer hole was not an immediate environmental priority for the global South in the 1980s but the right mix of partnership made the regime a global success (Fahey, 2013).

A similar confluence of events may not occur frequently but there are various environmental issues that require concerted action by all states. The relevance of the spirit of solidarity remains central in a world that is facing various global environmental issues. These will need to be addressed in a spirit of partnership since the world will continue to be marked by high inequalities. Climate change has been the global environmental issue most debated and it is unsurprisingly where differential treatment has come under most severe attack. Yet, there are various other challenges that need and will need to be addressed jointly, such as the global water cycle. This will only be possible in a context that recognizes the differences between states and on the basis of differential commitments.

9.4.1 CBDR and the Evolving Climate Change Regime

CBDR has been at the centre of debates in the climate change regime (Rajamani, 2016; Lawrence and Reder, 2019). In the first place, this was because the principle was specifically made a central part of the legal regime adopted in 1992. This then translated into strong differ-

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ential provisions in the Kyoto Protocol that provided for different commitments for the global North and the global South. These were momentous changes that unsurprisingly came under vigorous attack, particularly from the United States, which showed strong reservations from the start to the idea that developing countries in general would not take on emission reduction commitments (United States, 1997).

The long negotiations that led to the Paris Agreement confirmed both the central role of CBDR in the climate change regime and the limits of the current structure of differential obligations. On the one hand, the attempt to sideline the principle of CBDR as a basis for negotiating the new legal instrument proved unsuccessful. On the other hand, a qualification was brought to the principle by adding to it 'in the light of different national circumstances' (Paris Agreement, 2015: Article 2.2).

This paved the way for the introduction of individual differentiation in the form of 'nationally determined contributions' (NDCs) that each country promises to achieve (Paris Agreement, 2015: Article 4.2). This new form of differentiation is radically different in its imagination from what is suggested in the discussion in Section 9.3.3 above (cf. Voigt and Ferreira, 2016: 295). This is due to the fact that it is individual countries that determine the level of their commitments, based on self-interest, rather than an international process of allocation of shares. This bottom-up framework has the advantage of helping to find a common minimum denominator, and helped find a consensus among major emitters (Ferreira, 2018). At the same time, this is only positive if compared to the no-agreement option, which would have been even worse in terms of environmental outcomes (Bodansky, 2016). In terms of global ambition, individual differentiation is self-defeating since it strengthens the tendency of countries to negotiate on the basis of self-interest rather than in a spirit of partnership and collective bargaining.

Overall, the Paris Agreement is regressive from a differentiation point of view in terms of the main commitments taken by member states. Indeed, it is neither progressive to let states decide how ambitious they will be in their response to global environmental problems nor innovative to let countries take on voluntary commitments on an individual basis.[6] At the same time, differentiation remains central to finding agreement around global environmental issues, as confirmed by the financial provisions of the Agreement (Paris Agreement, 2015: Article 9).

9.4.2 Continued Relevance and Evolution of CBDR

Attempts to curtail the scope and relevance of CBDR in the climate change regime have been seen as an attack on CBDR in general. This may superficially seem apt in a context where climate change occupies a disproportionate amount of space in the media and policymaking sphere. However, in legal terms, the climate change regime is only one of a number of environmental regimes that make up international environmental law. The latter cannot be subsumed under the former. Further, the specific restatement of CBDR in a number of legal instruments since the beginning of the century confirms the central role it plays. Its relevance is unlikely to wane in a context where inequalities between the poorest and richest states are likely to remain very significant.

This leads to broader questions concerning the place of CBDR in international law. As mentioned earlier in this chapter, differential treatment is but a new avatar of preferential treatment that developed in the aftermath of decolonization. The principle of CBDR may be specific to

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environmental law but the underlying notions of equity that it conveys have applications that go much beyond environmental law.

Differentiation is important because it strengthens the equity dimension of international law. At the same time, it makes the adoption of legal instruments easier for a greater number of states and their implementation more effective by ensuring that all states have the means to comply with their commitments. It is therefore probably unsurprising that the progressive morphing of environmental law into sustainable development law has led to CBDR becoming more directly addressed in sustainable development instruments. This is, for instance, the case of the 2030 Agenda for Sustainable Development, which mainstreams sustainable development as the new framework guiding overall UN development policy until 2030, through the adoption of the Sustainable Development Goals, and specifically restates the principle of CBDR (UNGA, 2015: para. 12).

Yet, if CBDR finds a mention in soft law instruments concerning sustainable development, this is yet to have a significant impact on binding legal instruments. This can be illustrated with the case of water, which is usually considered a separate area of law, even though water is also a subject of environmental law. International water law, as reflected in the main existing binding instrument, the UN Watercourses Convention, has largely failed to integrate developments in environmental law (Convention on the Law of the Non-Navigational Uses of International Watercourses, 1997). This includes a failure to integrate differential treatment (Sohnle, 2014: 223). Yet, the necessity for differentiation in water law is as strong as it is in environmental law.

The limitations of water law from the point of view of differentiation are highlighted with the specific example of groundwater. At present, the only general text that exists concerning groundwater is the draft International Law Commission (ILC) Articles on groundwater (ILC, 2008). These assert state sovereignty over aquifers as a basic principle, something that is a step back from the principles governing transboundary watercourses where elements of cooperation are recognized (McCaffrey, 2007). Yet, while the draft Articles propose a conservative understanding of groundwater, they still recognize the need to take into account the special situation of developing countries and include a specific provision on technical cooperation with developing countries (ILC, 2008: Preamble, Article 16).

The limited recognition of the special situation of the global South in the draft Articles on groundwater confirms that there is a gap that needs to be addressed more systematically. In fact, differentiation must be integrated in all related areas of sustainable development. This is, for instance, the case in respect of agriculture, which remains the single most important sector in terms of generating livelihoods in countries of the global South. While agriculture occurs in areas under sovereign control, there was until the 1980s a shared understanding that seeds were a common heritage of humankind, which provided the basis for sharing and jointly protecting and developing new plant varieties with a broad rationale of food security (International Undertaking, 1983). In the meantime, the development of biotechnology led global South countries to assert sovereign rights over their biological resources and to accept the introduction of intellectual property rights in agriculture in the global South (Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994). Yet, despite the shift towards different forms of appropriation, the International Treaty on Plant Genetic Resources for Food and Agriculture seeks to maintain a certain amount of free sharing of seeds (International Treaty on Plant Genetic Resources for Food and Agriculture, 2001).

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In effect, agriculture is an area that is ripe for a more widespread application of the principle of CBDR. Every country is concerned, and every country is dependent on germplasm from other parts of the world for their main crops. This creates in principle a good basis for a strong partnership among all countries. Such a partnership did exist previously and was then sidelined. This has not helped the majority of the world's farmers in the global South and a return to solidarity and partnership, based on CBDR and common heritage, is emphatically needed.

9.4.3 Rethinking CBDR beyond Sovereign Interests

The development of CBDR, like that of international environmental law in general, has been centred on states' sovereign interests and assertion of sovereign rights. As a result, all international environmental issues, from bilateral transboundary issues to planetary issues, have been addressed from the standpoint of states asserting their sovereign national interests. This is not surprising to the extent that the global South is largely made of states that only acquired the attributes of sovereignty in the second half of the twentieth century. Yet, this fails to provide an appropriate basis for addressing international environmental issues, as confirmed by the case of the climate change regime where the Paris Agreement reflects in large part individual concerns of individual nation states rather than an international ambition to effectively tackle a problem that will probably lead to the destruction of human civilization as we know it in the next century.

The problem is thus that CBDR is structured around an inappropriate understanding of the nature of international environmental issues, which cannot be addressed effectively through the lens of sovereign interests. There are good reasons why this was the starting point and good reasons why global South countries in particular do not want to cede their hard-earned sovereignty. At the same time, humankind faces challenges that are beyond the ability of any nation to address individually or regionally and these challenges have the capacity to so radically affect life on the planet that sovereign interests are quite subsidiary in comparison. In addition, some of the main environmental regimes where CBDR has been implemented concern global problems that are quintessentially incapable of being addressed from the standpoint of discrete territorial units.

The way forward is not for states to give up control over their resources to a global government that may prove to be even less democratic than existing institutions. In fact, the starting point for rethinking structures must start at the local level by using the principle of subsidiarity (Jachtenfuchs and Krisch, 2016). At the same time, there is a need to recognize the continuum that exists sometimes from the very local to the global level. This is, for instance, the case with local air pollution, which is increasingly choking large cities, and climate change. This is also the case with access to groundwater through wells, whose availability is directly linked to recharge by rainfall, itself linked to the global water cycle.

This new way of looking at environmental issues calls for rethinking the issue of appropriation over the environment and natural resources. Indeed, both sovereign and individual appropriation are problematic and need to be addressed jointly. Conceptually, this implies recognizing that environmental resources cannot be appropriated and are in the custody of the whole of humankind (Franck, 1993: 92). At the national level, the doctrine of public trust applied in some countries to environmental resources constitutes an attempt to address problems of individual appropriation and assertion of eminent domain (Takacs, 2008). At the international level, the concept of the common heritage of humankind has been used to

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identify resources that cannot be owned, must be managed jointly and whose benefits are also enjoyed jointly (Stec, 2010).

The common heritage of humankind is a known legal concept, which has been applied to several legal regimes, including in the context of the use and protection of deep seabed minerals under the high seas (United Nations Convention on the Law of the Sea, 1982: Article 1(1)1; Part XI). It is also a controversial notion because it challenges the sovereign control cherished by states. Yet, it is particularly relevant in the context of a differential treatment discussion because debates at the time of its introduction centred around an equity rationale.[7] The principle of common heritage of humankind is an appropriate basis for addressing global environmental issues from a redistributive perspective. It could easily be applied to a whole range of international environmental issues. In some cases, as with the case of Antarctic water resources already under some form of joint management, or water found in the atmosphere that is not claimed by states, the application of the principle should be straightforward. In other cases, such as climate change, where it is crucial to apply common heritage, what is needed is a completely different understanding of the problem at stake. To date, countries have addressed climate change at the international level through the lens of their national self-interest. The nature of the challenge demands that states adopt a completely different perspective in which the global issue of climate change will be the lens through which regulatory measures are adopted. The principle of the common heritage of humankind provides an apt basis for a fresh start.

9.5 CONCLUSION

The principle of CBDR is the main manifestation of equity in international environmental law. It builds on similar efforts in the international law of development in the aftermath of decolonization but the specificity of some international environmental issues ensured that the basis for negotiating a different legal regime was based on shared interests of the global South and the global North, something that did not obtain in the era of the new international economic order.

It is today difficult to imagine international environmental law without preferential measures. Indeed, even in the Paris Agreement, where a lot of pressure was applied to avoid or dilute the principle of CBDR, there are various references to the special circumstances of developing countries, including in the general commitment clause that specifies the need for 'recognizing the need to support developing country Parties for the effective implementation of this Agreement' (Paris Agreement, 2015: Article 3). In all other respects, international environmental law is and will likely remain structured around a South–North axis. This is in part unavoidable in a context where the vast majority of countries of the global South have not seen their human development increasing faster than countries at the top of the human development index scale. The increasingly prominent issue is that the global South cannot easily be reduced to a single entity. This is why, without breaking the South's solidarity, it is crucial to ensure that a more refined system of reflecting CBDR in treaty provisions is found so that a landlocked least developed country or a small island state is not given the same rights and obligations as a BASIC country.

Overall, CBDR has contributed to making international environmental law a dynamic area of international law, that includes innovations from which other fields can learn. Within the field of international environmental law, it has been crucial in bringing on board the global

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North and the global South in a multiplicity of treaties where their interests did not necessarily coincide at the outset. The new tools that differentiation offers to negotiating states, from differential provisions to implementation aid, have been crucial in building consensus among the largest number of states. In this sense, CBDR has played a role in strengthening the equity dimension of environmental law. Further, it has contributed to its relevance and effectiveness by ensuring that global environmental issues are effectively addressed by nearly all states. CBDR has lost none of its relevance in a highly unequal world and should remain a central principle of international environmental law.

NOTES

1 On the contrary, as acknowledged by Rakowski (1991), differences resulting from voluntary wagers cannot serve as a basis for redistributive claims.
2 UNFCCC, 1992: Art. 3(1). Note that the Convention adds the additional concept of 'respective capabilities', which serves to complement 'differentiated responsibilities'.
3 See, for example, Voigt, 2014: 67 concerning the Gothenburg Protocol to the Convention on Long-Range Transboundary Air Pollution.
4 Cf. Tigre (2016: 424) arguing that 'Brazil, like other emerging economies, should become a regional leader and embrace stricter responsibilities on a par with its development'.
5 See also Deleuil (2012: 277) arguing that CBDR is not a rule of international law and therefore has no autonomous binding force.
6 Cf. Jodoin and Mason-Case (2016: 270) arguing that through 'an innovative interpretation and application of the CBDR principle … developing country governments could take on voluntary commitments to reduce their carbon emissions'.
7 E.g. Pinto (2013: 110) noting that 'To the majority of participants at the Third United Nations Conference on the Law of the Sea "common heritage of mankind" came to imply distributive justice, cooperation and preferential treatment for the poor'.

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Annex 553

S. Alam, *Technology Transfers and Assistance*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW, eds. L. Rajamani and J. Peel (Oxford University Press, 2021), pages 960-967

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Part VIII Compliance, Implementation, and Effectiveness, Ch.55 Technology Assistance and Transfers

Shawkat Alam

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(p. 956) Chapter 55 Technology Assistance and Transfers

I. Introduction: Technology Transfers—Principles and Contents

Some of today's sustainable development challenges can be effectively addressed through the application of technically-based solutions, governed by international law. Accordingly, the transfer of environmentally sound technology from advanced economies to developing and least-developed countries (LDCs) plays an important role within international environmental law. Developing countries and LDCs are exposed to higher risks associated with environmental problems, such as climate change, and stand to benefit the most from a diffusion of new technology.[1] However, without the effective cross-pollination of new technology and ideas, developing countries and LDCs face a false dichotomy of needing to adopt conventional economic policies on the one hand, and to further environmental conservation objectives on the other.

The idea of technology transfers has generated several working definitions across the literature. According to Vac and Fitiu, technology transfer refers to 'the range of strategies that promote the transfer of new innovation, knowledge, technology, practices and/or skills from one setting to another'.[2] Technology transfers can come via a range of different modalities. Licensing, importation through goods and services, copying, joint (p. 957) ventures, mergers and acquisitions, are all different types of methods to transfer technology effectively.[3] 'Technology', in this sense, not only covers the use of 'hard' infrastructure, but also includes practices and know-how. Transfers can also occur through a range of different actors, including the private sector, universities, public research institutions, and government.

Technology transfer stands as its own separate concept that is distinct from other related activities such as technical assistance and foreign aid.[4] Although many states provide technical assistance as part of foreign aid projects, technology transfers focus on the effective dissemination of technology beyond the lifecycle of particular projects. Capacity-building, training, and professional human resource development are all elements of technology transfers into recipient countries that take place on longer timescales, so that developing countries and LDCs can possess the capabilities to pursue sustainable development.

At its heart, technology transfers aim to address the inequitable distribution of costs and benefits that have occurred between developed and developing countries under conventional patterns of economic growth.[5] As this chapter will consider in Section II, this has been reflected through a range of international environmental law instruments. However, despite the prevalence of technology provisions in international environmental law, there remains a lack of effective implementation. This can be attributed, in part, to the tension between technology transfers and the protection of intellectual property rights, discussed in Section III of this chapter. As Section IV will consider, direct confrontation between the intellectual property and technology transfer regimes has been side-stepped, but there remains a strong need to seek complementarity between the two systems.

II. The Evolution of Technology Transfers: From Dependency and Differential Treatment to North-South Collaboration

International environmental law has long recognized the importance of technology transfers through a range of mechanisms, from declaratory statements to specific treaty commitments, calling on parties to transfer technology on a fair and equitable basis. This can be attributed in part to the mutual recognition that a collective technological response to the challenges of sustainable development and environmental degradation (p. 958) is

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needed from the global community. This has been reflected through the progressive development of international environmental law and other key legal instruments.

A. Code of Conduct for Technology Transfers

One of the earliest soft law instruments that recognized the need to promote technology transfers was the Draft International Code of Conduct on the Transfer of Technology ('the Code of Conduct'), drafted under the auspices of the United Nations Conference on Trade and Development (UNCTAD). One of the basic principles of the Code of Conduct is to utilize emerging industrial technology to promote and facilitate economic growth in developing countries.[6] Although the Code of Conduct was negotiated before concepts such as sustainable development became mainstream within development discourse, the Code of Conduct did recognize that technology transfers play a central role in 'international peace and security, promoting international economic stability and progress, [and] for the general welfare of nations'.[7] Importantly, the Code of Conduct focuses on justifying technology transfers as a matter of justice, both to address past colonialism and systemic economic exploitation.[8]

The Code of Conduct contains several obligations requiring members to create national regulations to promote technology transfers. Article 3.4 specifies four main groups of regulatory reforms that are earmarked for action by signatories: financial reform, such as promoting conditions for domestic credit and financing; regulations allowing the renegotiation of transfer agreements; regulations governing technical aspects of transfers, such as providing analysis of technology transfer needs to assist negotiating parties; and regulations to support institutions charged with promoting technology transfers, such as information exchange mechanisms and enforcement provisions.[9]

The Code of Conduct also recognizes the special needs of developing countries by addressing issues of economic inequality. Chapter 6 of the Code of Conduct contains several obligations for developed countries to facilitate access to data, create facilities to encourage research and development, and promote developing country expertise.[10] Special treatment accorded to LDCs must also recognize their specific social and economic conditions.[11]

The Code of Conduct emerged from the power imbalance experienced by developing countries from the technological power held by large transnational corporations (p. 959) (TNCs) and developed countries. During negotiations, several developing countries signalled their intention to create instruments promoting the adaptation of new technology to their domestic economies. Latin America countries implemented several regulations addressing the loss of technology that occurred when large firms left their domestic markets to move to less regulated economies.[12] The Code of Conduct was negotiated in contemplation of this context, and was created primarily to serve the interests of developing countries in a bid to overcome the inherent hegemony enjoyed by developed economies with technological superiority.

In contrast, developed economies expressed their intention to continue to use the market as the best form of allocating technological resources, even though developing countries were unable to address inherent inequalities and market failures experienced as a result of this approach. The G77 and Nation Groups B and D of the Code of Conduct contested the adopted scope of an 'international transfer' of technology.[13] G77 and Group D argued that a transfer of technology within a multinational group of companies could constitute an international transfer and therefore encompass these transfers within the Code of Conduct. Group B, consisting of Western European nations and other advanced economies, disagreed by submitting that such transfers could not fall within the scope of the Code of Conduct. This submission presented a problem for developing countries: by carving out domestic

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multinational corporations from the Code, the Code would lose its significance as these bodies could simply establish a local subsidiary to bypass obligations.[14]

The failure of the Code of Conduct can also be attributed to fundamental philosophical differences between negotiating groups. To this extent, developed nations advocated the importance of free market principles and the 'freedom to contract' between parties. The mandatory nature of the Code of Conduct, reflected in the commitment that developed countries 'shall' transfer technology, was a clear affront to the free market approach advocated by developed countries.[15] Conversely, developing countries pointed to the fact that the purpose of the Code of Conduct was to address the structural inequalities and market failures that had resulted from attempting to liberalize economies and adopt a free market approach. What is clear is that since initial negotiations between the Global North and South, the Code of Conduct has failed to achieve a 'quantum leap' forward due to the political environment between negotiating countries at the time.[16]

(p. 960) B. Technology Transfers Under International Environmental Law Instruments

Technology transfers have been an important mechanism to achieve the objects and aims of several key international environmental legal instruments. The following sections discuss several prominent examples, tracing a shift from an early focus on technical assistance to a more comprehensive and collaborative approach.

1. Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution

The technical capacity-building needs of states, and using transfer mechanisms to address constraints, were recognized within the 1976 Convention for the Protection of the Mediterranean Sea Against Pollution (the Barcelona Convention), which regulates the discharge of hazardous substances into the Mediterranean by contracting parties and restricts the dumping of waste from ships and aircraft into the marine ecosystem. Since its entry into force in 1978, the Barcelona Convention has expanded with the introduction of seven additional Protocols that restrict offshore pollution and biodiversity loss, and call on contracting parties to implement Integrated Coastal Zone Management (ICZM) in their coastal management plans.[17]

Initially, the Barcelona Convention required contracting parties to foster further scientific and technological cooperation. Article 11 required parties to coordinate their national research programmes relating to marine pollution, and for them to exchange data and other scientific information. This included the requirement, imposed by Article 11.3, to provide 'technical and other possible assistance … with priority to be given to the special needs of developing countries in the Mediterranean region'. However, the Convention has since been amended in order to make the language consistent with other instruments regulating the marine environment, specifically the 1982 United Nations Convention on the Law of the Sea (UNCLOS).[18] Under the amended Article 11 of the Barcelona Convention, parties undertake a commitment to promote 'research on, access to, and transfer environmentally sound technology, including clean production technologies and to cooperate in the formulation, establishment and implementation of clean production processes'. The technology transfer mechanisms contained therein focus on creating partnerships to address technological inequality within the marine research arena.

(p. 961) 2. Cartagena Convention and Noumea Convention

Echoing the original approach outlined above in the Barcelona Convention, further operationalization of an obligation to provide developing countries with technological assistance is provided by both the 1983 Cartagena Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region and the 1986 Noumea Convention which applies in the South-Pacific Region.[19] Article 13.3 of the

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Cartagena Convention provides that parties will cooperate with each other and international organizations to provide 'technical and other assistance', and, similar to the original approach of the Barcelona Convention above, 'tak[e] into account the special needs of the smaller island developing countries and territories'. The Noumea Convention imposes obligations for technological assistance in almost identical terms, contained in Article 18. The above three international agreements in the marine area illustrate early forms of differential treatment and technological assistance in international environmental law. There is a clear focus on cooperation and considering the different needs of developing nations. Although both the 1983 Cartagena Convention and the 1986 Noumea Convention only provided for technical assistance and subsequent multilateral environmental agreements (MEAs) provided more comprehensive transfer obligations, as discussed below, these earlier agreements marked a shift by placing a burden on developed countries to assist in disseminating new environmentally sound technology and recognize the special needs and technical capacity constraints that plagued developing countries.

3. United Nations Convention on the Law of the Sea

The primary purpose of UNCLOS is to outline the jurisdictional limits of coastal states, manage how states can use the world's marine resources, and create obligations concerning the protection and preservation of the marine environment.[20] Technology transfer is an important mechanism within UNCLOS, creating mutual obligations for developed and developing countries to build capacity with a view to effectively manage marine resources. As reflected in Article 150 of UNCLOS, the overall policy objective for technology transfers is to 'foster a healthy environment' and to promote 'cooperation for the overall development of all countries, especially developing States'.

UNCLOS arguably places a greater onus on developed countries to facilitate technology transfers to developing countries and LDCs than comparable instruments such as the Barcelona Convention, discussed above. Under Article 144.1(b), authorities are required to 'promote and encourage the transfer to developing States of [such] technology and scientific knowledge so that all State Parties benefit therefrom'. In addition, Article 144.2(a) requires states to ensure that all technology be provided under 'fair and reasonable terms and conditions'. Part XIV of UNCLOS also contains several provisions relating to technology transfers. Under Article 266, states have an 'active' obligation to (p. 962) ensure that they transfer marine science and technology on fair and reasonable terms,[21] and foster favourable economic and legal conditions to facilitate transfers.[22]

UNCLOS does not clarify what 'fair and reasonable terms' means. However, the technology transfer obligations under the regime are further supported by the work of the Intergovernmental Oceanographic Commission (IOC), which creates guidance material on key terms under the Convention.[23] The 'IOC Criteria and Guidelines on the Transfer of Marine Technology' (the IOC Guidelines) have provided a broad definition of 'marine technology'[24] and call for the establishment of a clearing-house mechanism to transfer marine technology.[25] Despite this effort, implementation is lacking to date. This can be attributed to the fact that a significant proportion of marine technology remains dispersed through a wide range of actors, such as private firms or universities.[26] In conjunction with this, there exists a lack of awareness in developing countries and LDCs of the potential for this mechanism to transfer marine technology.[27]

4. Convention on Biological Diversity

The 1992 Convention on Biological Diversity (CBD) contains important provisions concerning technology transfers. According to Waibel *et al*, the objective of the CBD is twofold: developed countries receive access to genetic material from developing countries, in return for a rules-based system to facilitate technology transfers and a share in the profits that result from the exploitation of genetic material.[28] Much like UNCLOS, Article 16.2 of the CBD states that developing countries are to be provided with technology on fair

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and the most favourable terms, including through concessional and preferential conditions. Importantly, however, the CBD goes further to clarify the relationship concerning intellectual property rights. Under Article 16.2, technology that is subject to intellectual property rights can also be subject to favourable access, whilst acknowledging that such access must be facilitated in a manner that is consistent with intellectual property rights.

The CBD recognizes that effective technological dissemination is operationalized through capacity-building projects with developing countries and LDCs.[29] Under Annex II of the CBD, parties must be sensitive to 'the capacity needs of recipients' when pre-assessing the adaptability of prospective technology to be transferred.[30] This is (p. 963) consistent with the broader commitments under Article 18 of the CBD, which imposes an obligation to provide special attention 'to the development and strengthening of national capabilities, by means of human resource development and institution building'. This approach serves as an important function, as it requires developing countries also to examine their specific technological needs in order to improve the opportunity for effective integration into the local marketplace.

The obligation to provide access to technology on fair and the most favourable terms that are mutually agreed upon by parties promotes a collaborative approach. This approach is further elucidated by Article 20 of the Convention, calling for developed countries to provide financial and technical assistance to developing countries and LDCs in support of their capacity-building initiatives. Encouraging mutually agreed terms between developed and developing countries, and LDCs, thus disrupts patterns of creating long-term dependency on advanced economies to supply technological innovation, and of entrenched inequitable development.

5. United Nations Framework Convention on Climate Change

The international climate change regime contains a significant number of provisions concerning the diffusion of environmentally sound technology, and advances relevant institutional responses. Under Article 4.5 of the 1992 United Nations Framework Convention on Climate Change (UNFCCC), Annex II Parties (ie developed countries) shall 'take all practicable steps to promote, facilitate, and finance, as appropriate, the transfer of, or access to, environmentally sound technologies to other Parties, particularly developing country Parties'. This general commitment is reinforced by Articles 3.14, 10(c), and 11 of the 1997 Kyoto Protocol whereby parties commit to the 'promotion of effective modalities for the development and diffusion of … environmentally sound technologies, know-how, practices and processes pertinent to climate change'. Articles 10 and 11 of the Kyoto Protocol also present a synthesis of technology transfer obligations with key ideas present in sustainable development discourse by framing transfers as a common but differentiated responsibility held by developed countries.[31]

The Kyoto Protocol also enabled the creation of the Clean Development Mechanism (CDM),[32] a framework which allows developed countries to obtain Certified Emission Reduction credits (CERs) in return for implementing clean technology within developing countries and LDCs. Subject to the requirement that a project provides support that is genuinely additional (ie CDM projects that are subject to CER credits would not occur but for CDM assistance), the CDM was anticipated to provide genuine opportunities for technology transfers and for developing countries to improve their ability to access environmentally sound technology. The CDM thus presented a landmark mechanism as it utilized market-based forces (in the form of CERs), rather than a general commitment, in order to drive innovation. However, to date, the performance (p. 964) of the CDM to

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generate technology transfers effectively has been poor, with only 0.6% of CDM projects eventually resulting in full technology transfers with the recipient country.[33]

The UNFCCC has since reached political consensus to establish a 'Technology Mechanism'.[34] The Technology Mechanism consists of a Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN) as established under the Cancun Agreement.[35] Under the Technology Mechanism, the TEC provides policy advice and recommendations on how to enhance the transfer of environmentally sound technologies. The TEC is further supported by a number of task forces to provide specialized policy advice on systemic issues concerning transfers of environmentally sound technology such as innovation financing, adaptation, research and development, mitigation, and endogenous capacity of recipient countries. Conversely, the CTCN is charged with implementation by providing technical assistance to developing countries and LDCs, fostering access to information and knowledge on climate technologies, and encouraging collaboration between developed and developing country partners.[36]

The 2015 Paris Agreement has since revitalized institutional responses to promote technology transfers to combat climate change through the establishment of the 'Technology Framework'.[37] At the 2018 Katowice Conference of the Parties, a preliminary determination was delivered to keep both the TEC and CTCN as part of the Technology Framework,[38] but in keeping with commitments from the Paris Agreement, also necessitating stronger collaboration with the Financial Mechanism of the Convention to develop more collaborative approaches to technology transfers. In particular, parties acknowledged that further action is required at the earlier stages of innovation (eg research and development, and improving endogenous capacity)[39] under the new Technology Framework.

6. Technology transfers and sustainable development law

Although the concept of sustainable development, more generally, is traceable in a number of texts pre-dating the 1972 UN Conference on the Human Environment (p. 965) (the Stockholm Conference),[40] the Stockholm Conference saw the initial emergence of technocratic responses to tackle global inequality and environmental damage. Principle 9 of the Report of the UN Conference on the Human Environment called for the 'transfer of substantial quantities of financial and technological assistance as a supplement to the domestic effort of the developing countries' in order to address environmental deficiencies.[41]

Subsequently, technology transfer to developing countries was reinforced under the 1992 UN Conference on Environment and Development and its Rio Declaration.[42] Principle 34 of the Rio Declaration called for developing countries to be assisted by gaining increased access to technology and know-how in the public domain, including technology and processes protected by intellectual property rights.[43] Although the Rio Declaration anticipated the creation of the Code of Conduct for Technology Transfers at the time of negotiation,[44] increased access to technology would be facilitated through the formation of a network of laboratories to examine new environmentally sound technology.[45] Principle 35 further supported this commitment, calling for states to measure the environmental performance of new technology.

However, the most significant issue arising from both the Stockholm and Rio Conferences was 'not an absence of ideas', but rather disagreement concerning how technology transfers could be effectively implemented.[46] In this context, the subsequent Johannesburg Conference in 2002 emphasized the need to develop partnerships and 'work together' in order to side-step the political impasse between the Global North and South.[47] However, the deep disagreement on how to create systematic transfers of technology, much like the debate over the UNFCCC Technology Mechanism, divided developed and developing countries during the negotiation process. In the outcome document of the Rio+20 summit,

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‘The Future We Want’,[48] states merely affirmed ‘the importance of technology transfers to developing countries’[49] and recommended that ‘relevant UN agencies identify options for a facilitation mechanism that promotes the (p. 966) development, transfer and dissemination of clean and environmentally sound technology’.[50] The Rio+20 summit did not present tangible action on the ground to facilitate technology transfers to developing countries.

Since the Rio+20 summit, there has been a renewed impetus to establish a systematic approach to technology transfers as part of sustainable development. Building upon further negotiations since Rio+20,[51] the UN Secretary-General recommended several plans for reform, namely, capacity-building exercises, voluntary actions that can be undertaken by states (such as performing peer review of the specific technology needs of developing countries), and institutional reform, including the creation of a Technology Facilitation Mechanism (TFM).[52] The President of the General Assembly also noted a number of future deliverables, including the launch of an online platform to map existing technology facilitation mechanisms, improve coordination within the UN system of existing technology transfer mechanisms, analyse gaps that can create a barrier to effective diffusion and promote further discussions concerning collaborative intellectual property rights and public-private partnerships (PPPs).[53] The UN Secretary-General’s Synthesis Report issued in 2014 also highlighted a need to create a Technology Bank and a Science, Technology and Innovation (STI) Capacity Building Mechanism for LDCs,[54] together with efforts to accelerate the innovation-to-market process of new technology.[55]

Calls to create a TFM came to fruition in the Addis Ababa Action Agenda.[56] Under paragraph 123 of the Agenda, the TFM is tasked with promoting coordination and coherence within the UN system, establishing an outline platform to promote open access for scientific publications, know-how, best practices and dissemination of other scientific knowledge to developing countries, and creation of a forum for stakeholder engagement between developed and developing countries. At the time of writing, the TFM had announced plans to develop (p. 967) roadmaps and action plans to track and measure the transfer of technology into developing countries.[57]

C. Synthesis: Technology Transfers in International Environmental Law

Technology transfers are an important mechanism in international environmental law to fulfil the goals and objectives of several treaties and crosscutting environmental instruments.[58] From the analysis of technology transfer provisions above, it is evident that there has been an evolution towards a more collaborative approach to foster higher technological dissemination. A requirement to transfer has given way to strategies that emphasize collaboration through PPPs, technology assessments, and capacity-building exercises. More generally, this is consistent with how development discourse has progressed, with a movement away from the differential treatment of developing countries and LDCs, towards improved dialogue concerning sustainable development discourse that emphasizes capacity- and governance-building.[59] This approach directly tackles long-term trends of entrenched dependency to allow developing countries to become more self-sufficient in pursuing their own sustainable development aspirations.

Yet despite this objective, developed countries have abrogated their responsibility to build the capacity of developing countries and LDC partners. To date, technology transfer provisions within international environmental law have remained largely under-utilized, and there has been no clear action to translate obligations into tangible outcomes for developing countries.

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It is worth noting that new dynamic relationships between developing countries and LDCs, or South–South transfers, are playing an ever increasingly important role in technology transfer. Developing countries are transferring technology within this bloc that is disrupting traditional North–South conceptions of technology inequity. However, (p. 968) such transfers are still experiencing the same issues of insensitivity to the capacity needs of recipient countries and insensitivity to their local political, social, and economic climates.[60] Transition economies such as China are also leveraging their market access to force technology transfers from developed countries. For instance, unscrupulous firms are requiring foreign investors to utilize joint ventures to obtain market access but are illegitimately copying sensitive intellectual property in the process.[61]

Underlying all of this, in part, is the role that intellectual property plays and how that shapes state, institutional, and individual firm responses to technology transfers for developing countries. In the lead-up to the Addis Ababa Action Agenda discussed above, negotiating parties were split along G77 and developed countries lines that predominately reflected whether their respective economies are net producers or recipients of technology transfers.[62] Since the failure of the Code of Conduct, developed countries have continued to resist efforts to trade technology and innovation freely, including environmentally sound technology, on the basis that it may harm competition and impede the encouragement of innovation by removing incentives from innovative firms.

However, to dismiss the system of intellectual property rights as a general roadblock for technological diffusion ignores the nuances present within the intellectual property rights regime which seeks complementarity with sustainable development objectives.[63] As Section III will highlight, both the technology transfer and intellectual property rights regimes have pursued coordination and complementarity, rather than conflict, to provide a consistent system governing innovation.

III. Technology Transfers and Intellectual Property: Challenges and Synergies

The World Trade Organization (WTO) and its 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs Agreement) govern the global system of intellectual property rights protection. For developed countries the core purpose of the TRIPs Agreement is to protect intellectual property rights for rights-holders. Conversely, developing countries advocate that the TRIPs Agreement must correct market failures and inequality arising from the protection of intellectual property (p. 969) rights, including a denial of access to environmentally sound technologies that can benefit humankind.[64] In its final form, developed countries were successful in asserting their dominance within the TRIPs Agreement, with TRIPs providing strong protections for intellectual property rights. The issues developing countries face, such as the equitable transfer of technology, conversely failed to appear in the Agreement's preamble.[65] Although Article 7 of the TRIPs Agreement does provide solace to developing countries by recognizing the need to effect technology transfers, its non-binding language reflects the continued dominance of developed country interests in this debate.

TRIPs contains a range of protections for intellectual property such as patents, copyrights, trademarks, and industrial designs.[66] Notwithstanding these protections, TRIPs also provide caveats to these rights in order to pursue shared, public goals. Article 27.2 allows exceptions from intellectual property protections based on the need to preserve 'human, animal or plant life or health' or 'to avoid serious prejudice to the environment'. However, this provision prevents the commercial exploitation of the innovation within the member's jurisdiction and use of this caveat must be found to be necessary to achieve environmental protection. Article 31 also allows states to give 'compulsory licences' in certain circumstances where voluntary efforts to obtain licences have failed, subject to the

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requirement that the initial rights-holder is paid adequate remuneration and the licence is predominantly used to serve the domestic market.[67]

TRIPs also contains specific provisions to enable technology transfers to developing countries. Under Article 66.2, developed countries 'shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least developed country Members in order to enable them to create a sound and viable technological base'. This provision is further supported by Article 67, which requires developed countries to create the conditions in which technology can diffuse into developing countries and LDCs, including a favourable regulatory environment. These provisions are silent on whether developed countries are mandated to hand over technological development to developing countries, rather, Article 67 particularly points to the need to promote governance reform and institutional capacity-building as methods to foster technological dissemination.

International environmental law has also turned to focus on governance reform to promote a legislative environment favourable to new innovation and technological diffusion. For instance, under the CBD, states must create legislation that mutually supports both technological transfers and the protection of intellectual property rights.[68] Although this requirement has softened to a general commitment for (p. 970) legislative reform regarding developing countries under the 2010 Nagoya Protocol,[69] these provisions mirror the TRIPs requirement to create marketplaces that are conducive to new innovation.

Although a range of international environmental instruments calls for technology transfers as discussed earlier, these are limited by the regime of intellectual property rights protected by TRIPs. Under Article 16.2 of the CBD, for instance, states must ensure that any technology transfers are consistent with the rights of rights-holders, with UNCLOS also containing similar provisions in relation to marine technology.[70] Principle 34 of Agenda 21 likewise recognizes the importance of intellectual property rights protection, noting that 'consideration must be given to the role of patent protection and intellectual property rights before recommending action such as creating technology clearing houses and performing technology assessments of developing countries'.[71]

These provisions provide cogent evidence of a push for further complementarity between the intellectual property rights and environmental technology transfer regimes. In the current era of Rio+20 and the 2030 Sustainable Development Agenda, the United Nations (UN) has earmarked this as a primary issue and area of focus for the future, so that states, intellectual property rights-holders, and communities in need are presented with a logically consistent system to facilitate long lasting technology transfers.

IV. Conclusion

Technology transfers are an important mechanism to implement the goals and objectives of several international environmental instruments. We have witnessed how understandings of this concept have evolved, from initially addressing structural inequality resulting from colonialism and economic exploitation of the South by the North, to an important mechanism to address and prevent environmental calamities and realize sustainable development.

Nevertheless, the rights of innovators are a central consideration complicating the realization of transfer provisions in environmental laws. Developed countries and advanced economies have continued to undermine the relevant provisions of international environmental law and other instruments by failing to comply with their transfer obligations and weakening their commitments during negotiations. Moving forward, transfer mechanisms that are present in instruments such as the UNFCCC and Addis Ababa Action Agenda will need to reconcile these competing interests. (p. 971) Current actions such as capacity-building and technology assessments have been effective in side-stepping this

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issue by focusing on commitments by developed countries. Accordingly, this will become a live issue in making mechanisms such as technology clearing houses an effective tool when there is a lack of political will to bring about change.

Finally, the WTO system and TRIPs will play an important role in implementing technological change. The use of compulsory licences and the application of Article 7 of the TRIPs by WTO judiciary bodies will play a key role in supplementing further action to address technological imbalances. To date, action on technology transfers by developed countries has been limited. However, as we have witnessed with new mechanisms in the Addis Ababa Action Agenda and UNFCCC, there is a slow shift towards many of the ideas envisioned by the Code of Conduct almost fifty years ago. Only time will tell whether developing countries and LDCs will benefit from the realization of obligations of fair and equitable technology transfers to address many of their pressing development and environmental issues.

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55 Ibid.

56 UNGA Res 69/313, 'Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda)' (17 August 2015) UN Doc A/RES/69/313, para 123; see also UNGA Res 70/1, 'Transforming our World: The 2030 Agenda for Sustainable Development' (21 October 2015) UN Doc A/RES/70/1, para 70 which officially launched the TFM.

57 See 'Technology Facilitation Mechanism—Online information repository for the STI roadmaps work' <https://sustainabledevelopment.un.org/tfm#roadmaps> accessed 1 May 2019.

58 Technology transfers are also used as a mechanism in several other international environmental instruments and mirror similar commitments as outlined in this Chapter. These instruments include the 1992 Convention on the Transboundary Effects of Industrial Accidents; 1999 Protocol to Abate Acidification, Eutrophication and Ground Level Ozone; 1998 Aarhus Protocol on Persistent Organic Pollutants; 1998 Aarhus Protocol on Heavy Metals to the 1979 Convention on Long Range Transboundary Air Pollution; 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes; 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal; 1994 Convention on Nuclear Safety; 1985 Vienna Convention for the Protection of the Ozone Layer, art 4.2; 1987 Montreal Protocol, art 10(A); 1994 United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, arts 12, 16 and 18; 2001 International Treaty on Plant Genetic Resources for Food and Agriculture.

59 Lavanya Rajamani, 'The Changing Fortunes of Differential Treatment in the Evolution of International Environmental Law' *International Affairs*, 88/3 (2012): 605.

60 See Oliver Hensengerth, 'South-South Technology Transfer: Who Benefits? A Case Study of the Chinese Built Bui Dam in Ghana' *Energy Policy*, 114 (2018): 499, 506–507.

61 See Lee Bransetter, 'What is the Problem of Forced Technology Transfer in China?' *Econofact* (3 August 2018).

62 See Nathalie Risse, 'The Technology Facilitation Mechanism: Conceived in Rio, Born in Addis' *IISD* (10 September 2015).

63 See also Chapter 48, 'Intellectual Property', in this volume.

64 Carlos Correa, 'Can the TRIPS Agreement Foster Technology Transfer to Developing Countries?' in Keith Maskus and Jerome Reichman (eds), *International Public Goods and Transfer of Technology Under a Globalized Intellectual Property Regime* (CUP 2005) 227.

65 Ibid.

66 Part II.

67 arts 31, 31(h).

68 art 16.5.

69 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, art 23.

70 art 267.

71 *Report of the United Nations Conference on Environment and Development* (UN 1993) vol I, annex II—'Agenda 21', para 34.7.

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Annex 554

F. Vicuna, "Responsibility and Liability for Environmental Damage under International Law: Issues and Trends", *Georgetown International Environmental Law Review*, 1998, pp. 279-308, pages 279, 294-296

Reponsibility and Liability for Environmental Damage Under International Law: Issues and Trends

FINAL REPORT PREPARED FOR THE EIGHTH COMMITTEE OF THE *INSTITUT DE DROIT INTERNATIONAL* BY PROFESSOR FRANCISCO ORREGO VICUÑA, RAPPORTEUR ON THE SUBJECT OF ENVIRONMENTAL RESPONSIBILITY AND LIABILITY.

1. AN EVOLVING CONCEPTUAL FRAMEWORK

The *Institut de Droit International* appropriately decided to undertake the study, among other aspects, of the question of responsibility and liability under international law as applied specifically to the needs of environmental protection.[1] Current environmental concerns arising from the increasing activities that entail risks of environmental damage with transboundary and global detrimental impacts have indeed prompted new conceptual approaches in this matter, many of which are rooted in basic principles of international law that acquire an added dimension in this context.[2]

The emphasis on preventive measures rather than on the reparation of an injury that has already taken place is at the very heart of this conceptual evolution.[3] Principle 21 of the Stockholm Declaration[4] and Principle 2 of the Rio Declaration[5] have relied on this concept in making clear the responsibility of States to ensure that activities within their jurisdiction and control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction; the same holds true of course of the damage that may be caused to

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1. Institut de Droit International, *Declaration on a Programme of Action on the Protection of the Global Environment*, ANNUAIRE, Session de Bâle, Vol. 64-II, 1991, 408-12; *see also* Huitième Commission: L'environnment, Rapport de Monsieur Luigi Ferrari Bravo, Janvier 1992, and *Deuxième Rapport*, Mar. 29, 1993, *in Annuaire*, Session de Milan, Vol. 65-II, 1994, at 285, 290, respectively. See also the Preliminary Report, *Responsibility and Liability Under International Environmental Law: Issues and Trends*, submitted to the Eighth Committee of the Institut de Droit International, Aug. 22, 1994; Revised Report, Apr. 12, 1995, both available from the Secretariat of the Institute.

2. On the evolving principles governing responsibility under international law, see generally Ian Brownlie, *System of the Law of Nations: State Responsibility*, Part I, 1983; P.M. Dupuy, *La Responsabilité Internationale des Etats Pour les Dommages d'Origine Technologique et Industrielle*, 1976; P.M. Dupuy, *The International Law of State Responsibility: Revolution or Evolution?*, 11 MICH. J. INT'L L. 105 (1989); F.V. Garcia-Amador, Louis B. Sohn & R.R. Baxter, RECENT CODIFICATION OF THE LAW OF STATE RESPONSIBILITY FOR INJURIES TO ALIENS (1974).

3. Francisco Orrego Vicuña, *State Responsibility, Liability, and Remedial Measures under International Law: New Criteria for Environmental Protection, in* ENVIRONMENTAL CHANGE AND INTERNATIONAL LAW 124 (Edith Brown Weiss ed., 1992).

4. Stockholm Declaration on the Human Environment, Jun. 16, 1972, 11 I.L.M. 1416 (1972).

5. Rio Declaration on Environment and Development, Jun. 14, 1992, 31 I.L.M. 874 (1992).

railway transportation, pipelines, nuclear energy or biotechnology.[59] A similar approach is followed by some international regimes, such as oil pollution and nuclear energy,[60] since conventional regimes are linked to specific activities identified as dangerous, hazardous or ultra-hazardous.

A different approach is to include hazardous activities in general, providing basic criteria for listings of dangerous substances, as is the case of the Convention of the Council of Europe.[61] Still another approach is to consider hazardous all activities taking place in a given sensitive area, as it has been suggested for the annex on liability to the Protocol on Environment Protection to the Antarctic Treaty.[62] But even under comprehensive protocols such as the latter there is the question of activities which were not meant to be covered by the original treaty, thus requiring a listing of exceptions. In some other occasions the precise extent of activities relating to response action might not be entirely clear. The discussion about the scope of application of the draft liability Protocol relating to Transboundary Movements of Hazardous Wastes and their Disposal is illustrative of these difficulties.[63]

Comprehensive regimes will also need to accommodate differences existing between various sectors of activity and eventually provide for coordination with other international norms applicable to some of such sectors. It is not unusual that more than one liability convention might apply to a given activity, as will probably happen for example with waste disposal, in which case there is a need to provide for an order of priority. The application of the strictest standard in force, the standard most favorable to the environment, the option more favorable to the claimant or the choice of the claimant, are some of the criteria suggested to establish a priority.[64] The general rules of the Law of Treaties also offer guidance in this respect. In any event, in case of concurrent regimes or applicable rules on liability, compensation granted under one arrangement should be offset by the amount of payments made under other arrangements.

13. ISSUES RELATED TO THE DEGREE OF DAMAGE

An important question in the discussion of liability regimes has been the seriousness or degree of the damage to be considered, with particular reference to

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59. *Id.* at 14, with reference to Denmark, Italy, Portugal, the Netherlands and Germany.

60. *See, e.g.*, International Convention on Civil Liability for Oil Pollution Damage, 1969, *supra* note 42. *See also* Convention on Third Party Liability in the Field of Nuclear Energy, 1960, 55 AM. J. INT'L L. 1082 (1961), and the Protocols and Supplements thereto.

61. Council of Europe, Convention, *supra* note 35, art. 2 and Annex I, II.

62. Protocol, *supra* note 56, art. 16. The matter has been under consideration since the Sixteenth Antarctic Treaty Consultative Meeting (1991). Meetings of legal experts under the chair of Professor Rüdiger Wolfrum have been held periodically thereafter.

63. Report of the First Session, United Nations Environment Programme: Ad Hoc Working Group of Legal and Technical Experts to Consider and Develop a Draft Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal, art. 3, UNEP/CHW.1/WG.1/1/5, Sept. 16, 1993.

64. See, e.g., *id.*, art. 13 and the alternatives thereto.

whether all damage should be included or only that above a given threshold. First, it should be noted that if the damage arises from the breach of an obligation compensation should be granted in all such circumstances because this will be in general associated with the concept of State responsibility. In situations not involving the breach of an obligation, the requirement of a certain gravity or significance has been generally the favored approach, making a distinction between tolerated and serious impact, or between minor and transitory impact and that exceeding this level. Minor impact can be excluded from the definition of damage and hence from liability, among other reasons because the cost of evaluating small impacts might exceed its benefits. How to establish this threshold, however, has been a most difficult legal and practical problem.

A first possible approach is to provide for the "de minimis" rule which would allow for the discarding of tolerated, minor or transitory damage as defined under a given environmental regime, and only include the damage above the defined threshold of gravity and significance. A different approach altogether is to allow for an exemption from liability of damage caused at tolerable levels,[65] an approach which may entail an important shift in the burden of proof since the evidence to justify the exemption will have to be provided by the operator and not by the claimant. But even when in application of these criteria no reparation is called for, there might be a need for diplomatic satisfaction or other measures in certain circumstances. On the other hand, there is the question of whether all impacts above the defined threshold should be regarded as damage; each specific regime will probably have to differentiate in this regard and there is also the possibility of allowing for exceptions.

The main difficulty associated with this discussion lies in the foreseeability of damage. When a potentially damaging activity or a likely harmful result is identified beforehand, prevention and the operation of liability will be much easier than when foreseeability was not possible, without prejudice to the adoption of precautionary and other measures. There is also a close connection between the question of foreseeability and the utilization of Environmental Impact Assessments, a mechanism which has been devised with the precise purpose of anticipating potential damage and adopting the necessary preventive measures, including the operation of liability. Environmental Impact Assessment will facilitate the distinction between minor or transitory impacts and those impacts above this level. It should also be noted that an interesting shift in the burden of proof is taking place in the context of authorization of activities under recent international regimes. In the case of CRAMRA, for example, an activity would only be authorized if it is established that it will not cause adverse environmental impacts,[66] while under traditional approaches an activity could proceed unless an adverse impact was established. This shift favors environmental

65. Council of Europe, Convention, *supra* note 35, art. 8(d).

66. CRAMRA, *supra* note 53, art. 4(2).

protection as the first priority and it involves in general a broad Environmental Impact Assessment.

Activities which have been assessed involve also a number of problems in the context of the operation of liability. The submission of a proposed activity to Environmental Impact Assessment should not in itself exempt such activity from liability if the assessed impact exceeds the limit foreseen and judged acceptable. Neither does this procedure exclude liability for accidental or unforeseen damage as provided for under an environmental regime.

The point has been made that assessed activities should to an extent be exempted from liability; if so, only accidental or unforeseen damage would be covered. However, Environmental Impact Assessments should not turn into a certificate of liability-free activity, a situation which would deviate from the preventive function of this mechanism. To this effect damage as such should be subject to assessment and not only the proposed activity, since otherwise it would suffice to submit a proposed activity to assessment in order to escape liability. Moreover, an Environmental Impact Assessment may require that a specific guarantee be given for adequate compensation should the case arise. On the other hand, if an assessment by States Parties to a regime is not conducted with due diligence it might engage State responsibility for breach of the obligation devolving upon it in this respect.

14. THE DEBATE ABOUT EXEMPTIONS FROM LIABILITY

Again, with respect to exemptions, the distinction between State responsibility and international and civil liability should be kept under consideration. Exemptions from State responsibility are governed by the principles and rules of international law. Whether exemptions from international or civil liability should be allowed is a question that comes up in the preparation of all major environmental regimes. This issue and the problem of limits to liability discussed further above mark the essential difference between strict and absolute liability, the latter generally not accepting exemptions or limits.

Environmental regimes will normally allow for exemptions from liability to the extent compatible with their objectives. If strict liability is used as the applicable standard, the absence of willfulness or *culpa* does not constitute an exemption. Neither the mere unforeseeable character of an impact should in itself be accepted as an exemption. The proof of a direct causal nexus between the event justifying the exemption and the damage also shall normally be required to accept an exemption.

In current international practice exemptions based on armed conflict, terrorism or a natural disaster of an exceptional, inevitable and irresistible character, have often been accepted in environmental regimes and other liability arrangements. In respect to armed conflict, it has been rightly noted that only the victim should be entitled to invoke this event as an exemption, but even in this understanding