Sovereignty Bounded: Public Trusteeship for Common Pool Resources?

*Peter H. Sand**

All revolutions have their iconoclastic phase. When international lawyers first embraced the global environmental revolution—looking for icons to smash—they were eager to pick on the nation state as a target. Not surprisingly perhaps, much of the early literature on international environmental law and governance started from a radical *critique* of territorial sovereignty, suspected to lurk at the roots of many transnational environmental problems;[1] and from high hopes for the "fading away," "erosion," or "perforation" of operational sovereignty, as the preferred solution to those problems.[2]

Reality turned out to be different, or so it seems. Not only did state sovereignty prove its resilience as an organizing element for the post-Stockholm 1972 and post-Rio 1992 global ecological order.[3] Quite paradoxically, two of the most momentous recent developments in the worldwide codification of natural resources law resulted in a net expansion of national jurisdiction. First, the 1982 UN Convention on the Law of the Sea (LOS, article 56) formally extended the sovereign rights of coastal states to the vast new area of "exclusive economic zones,"[4] estimated to contain 25 percent of global primary production and 90 percent of the world's fish catch.[5] In 1992, the Convention on Biological Diversity (CBD) in article 15 extended sovereign rights to the even vaster

* Acknowledgments for review and comments are due to Klaus Bosselmann, Steve Charnovitz, Hong Sik Cho, Rudolf Dolzer, Harrison C. Dunning, Wolfgang Durner, Jeremy Firestone, Peter M. Haas, Robert O. Keohane, Peider Könz, Elisabeth Mann Borgese†, Sabine von Schorlemer, Paul C. Szasz†, Ernst U. von Weizsäcker, Jonathan B. Wiener, as well as the editors and the two anonymous reviewers of *Global Environmental Politics.*

1. Falk 1971, 222; Sprout and Sprout 1971, 406; and Caldwell 1973, 200. But see Falk 1995, 11: "I now believe that this earlier analysis was badly mistaken in several key respects."
2. See Karkkainen, this issue, and Falk 1975, 2; Mayer-Tasch 1985; Kiss 1992, 13; Brown Weiss 1993, 710; Caldwell 1996, 331; Hinds 1997; Odendahl 1998; van der Lugt 2000; Jänicke 2002; and generally Czempiel 1969; Camilleri and Falk 1992, 185; Schreuer 1993; Henkin 1994; and Krasner 1999.
3. Haas and Lundgren 1993; Conca 1994; Chayes and Chayes 1995; Beyerlin 1995; Haedrich 2000; Perrez 2000; and generally Schrijver 2000; Kreijen 2001; and Werner and de Wilde 2001.
4. Eckert 1979; Orrego Vicuña 1989; and Hoel 2000.
5. IWCO 1998, 59.

Global Environmental Politics 4:1, February 2004

range of plant and animal genetic resources, thereby enclosing access to another major chunk of what had once been considered "heritage of mankind."[6] Another decade later, the FAO International Treaty on Plant Genetic Resources for Food and Agriculture bluntly put an end to that legal fiction: "In their relationship with other States, the Contracting Parties recognize the sovereign rights of States over their own plant genetic resources for food and agriculture, including that the authority to determine access to those resources rests with national governments and is subject to national legislation."[7]

So is the pendulum swinging back to the other extreme—to that "formidable defensive concept"[8] of permanent sovereignty over natural resources,[9] and its notorious "obsession with territory"?[10] I do not really think so. True, the new treaty language seems to acknowledge that states can have their "own" genetic resources, in the way in which the 1972 UNESCO World Heritage Convention recognized cultural and natural heritage sites as "property, to whatever people they may belong."[11] Yet the reference to ownership and property rights introduces an analogy to private property law here that is potentially misleading.[12] Just as the sovereign rights of coastal states in their maritime exclusive economic zones are qualified by specific obligations owed to other states and to the international community (LOS, articles 61–70), the sovereign rights of "countries of origin" over access to genetic resources *in situ* are matched by an obligation to facilitate access for other parties to the Biodiversity Convention (CBD 1992, article 15:2), by the catalogue of conservation duties spelled out in the convention (articles 5–14), and by the "multilateral system" established under the FAO Plant Gene Treaty (article 10:2).

In both instances, such limitations on sovereignty have been justified by community interests designating certain areas or resources as a matter of "common concern,"[13] not withstanding the fact that—unlike "common heritage" in the global commons *outside* national jurisdiction, such as deep-seabed or outer-space areas—they may be situated squarely *within* the territorial boundaries of states. Given those built-in restrictions, however, the analogy to "ownership" rights becomes so diluted as to evoke a different legal analogy altogether, that is, the role of the nation state becomes more akin to a kind of *public trusteeship*—an idea which has indeed been gaining ground in modern environmental law, and on which I will now focus.

The message is simple: The sovereign rights of nation states over certain environmental resources are not proprietary, but *fiduciary.* I will show this by

6. FAO/IU 1983, article 1; see Bordwin 1985; Wolfrum 1996; and ten Kate and Lasén Diaz 1997.
7. FAO/IT 2001, article 10:1; see Mekouar 2002; and Cooper 2002.
8. Allott 1989, 17.
9. Schrijver 1997; and Chimni 1998.
10. Scelle 1958.
11. Preamble, fifth paragraph. On the evolution of "national" vs. "common" heritage concepts for cultural property, see Williams 1978; Merryman 1983; Monden and Wils 1986; and Genius-Devime 1996.
12. Carty 1986, 44.
13. Brunnée 1989; Attard 1991; Simma 1994; Biermann 1996; Kiss 1997; Kornicker-Uhlmann 1998; and Durner 2001, 234.

reference to comparative environmental law, to so-called "stewardship economics," and to public international law.

The Public Trust in Comparative Environmental Law

The concept of public trusteeship for environmental resources has undergone a spectacular revival in the United States. A rather obscure, century-old Supreme Court case (*Illinois Central Railroad vs. People of the State of Illinois* 1892), rediscovered by a perceptive law professor,[14] became the starting point for a whole generation of innovative environmental law-making—from Michigan's Environmental Protection Act of 1970 to federal legislation such as the "Superfund" Act of 1980 and the Oil Pollution Act of 1990, and reflected in new constitutional provisions; for example, article 1 para. 27 of the Pennsylvania Constitution (as amended on 18 May 1971)[15] now reads:

> Pennsylvania's natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of the people.

What, then, is the idea of environmental trusteeship?[16] In very simplified language, it means that certain natural resources—e.g., watercourses, wildlife, or wilderness areas—regardless of their allocation to public or private uses are defined as part of an "inalienable public trust;" certain authorities—e.g., federal agencies, state governments, or indigenous tribal institutions—are designated as "public trustees" for protection of those resources; every citizen, as "beneficiary" of the trust, may invoke its terms to hold the trustees accountable and to obtain judicial protection against encroachments or deterioration.

The public trust doctrine is now well established in US environmental law, albeit not uncontested—partly because of its manifest reliance on property concepts.[17] Even though its origins are claimed to go back to ancient Roman law, most of its methodology and terminology is essentially derived from the Anglo-American common law of charitable trusts, under which all beneficiaries are entitled to hold a trustee accountable.[18] Simultaneously, and initially modeled after Britain's "National Trust for Places of Historic Interest or Natural Beauty" (1894, confirmed by legislation since 1907),[19] the "land trust movement" to preserve strategic natural areas for the community—conservancy by charitable title acquisition—has since spread throughout North America.[20] While courts in some common-law countries like Australia and Canada have been more reluctant to extend the environmental scope of trusteeship,[21] it found enthusiastic re-

14. Sax 1970; and ELQ 1998.
15. Dernbach 1999.
16. Rose 1986; Dunning 1989; and Slade 1990.
17. Lazarus 1986; Delgado 1991; and Ryan 2001.
18. Chesterman 1979.
19. Dwyer and Hodge 1996; and Waterson 1997.
20. Davis 1987; Abbott 1993; and Fairfax and Guenzler 2001.
21. Bates 1995, 70; Maguire 1997; and Tigerstrom 1997.

ception in others—witness article 2 of the Philippine Environmental Policy Decree of 1977, which proclaimed "the responsibilities of each generation as trustee and guardian of the environment for succeeding generations" (applied to the conservation of public forests in a widely quoted Supreme Court case, *Minors Oposa vs. Factoran* 1993);[22] Eritrea's Environment Proclamation of 1996, which designated the state as "custodian for the harmonized and integrated management and protection of the national environment and the sustainable use of natural resources" (article 5); South Africa's National Water Act of 1998, referring to the government as "public trustee of the nation's water resources" (ch. 1, para. 3); and India, where the Supreme Court in a landmark decision declared the public trust doctrine "part of the law of the land" (*Mehta vs. Kamal Nath* 1996, followed in two 1999 Supreme Court cases).[23]

Even more striking are similar developments in the environmental legislation of continental European countries, where the common law trust is *not* part of a national legal tradition.[24] In Sweden, for example, the Royal Academy of Sciences—and since 1964, the Nature Conservation Board—has been designated as public trustee for protected natural areas.[25] In Italy, the Court of Accounts (*Corte dei Conti*)—and since 1986, the Environment Ministry—acts as trustee for claims of damage to national heritage (*danno erariale*) in the field of natural resources that would otherwise remain without procedural representation.[26]

There are many historical precedents for the transnational diffusion of law, a cross-cultural process sometimes described as *mimesis,*[27] and similar to the spread of innovative technologies—or contagious diseases.[28] In the words of Roscoe Pound, former dean of Harvard Law School, "the history of a system of law is largely a history of borrowing of legal materials from other legal systems, and of assimilation of materials from outside the law."[29] Environmental law proved a particularly fertile ground for this "horizontal" transfer of innovative concepts and institutions,[30] well illustrated by the trusteeship doctrine.

Stewardship Economics and Common Goods

Recent economic literature, under the label of *stewardship economics*[31] identifies intergenerational "fiduciary responsibilities" of society with regard to certain re-

22. La Viña 1994.
23. Anderson 1998, 29; and Razzaque 2001.
24. Helmholz and Zimmermann 1998.
25. Hillmo and Lohm 1997.
26. Bianchi 1997.
27. Toynbee 1961, 343.
28. Hägerstrand 1967; Gould 1969; and Dolowitz and Marsh 2000.
29. Watson 1993, 22.
30. Sand 1990, 23; Kern and Jänicke 2001; Jänicke and Jacob, this issue; Clark, Jäger, and van Eijndhoven 2001; and Wiener 2001, 1298.
31. Young and McCay 1995, 94; and Page 1997.

sources such as "a fishery, a forest, the Internet, the air, the oceans, the ecological health of a stream, and so on;"[32] that is, a broad range of common goods, "environmental commons" in particular, which—depending on criteria of public accessibility or excludability—are categorized either as global collective or "public goods,"[33] or as common property or "common pool resources" (CPRs).[34] Besides opening new intergenerational perspectives in economic and sociological analysis,[35] interdisciplinary research has also focused attention on the economics of "trust" as a general organizing principle in social psychology,[36] which mirrors Joseph Sax's legal definition of public trusteeship as "preventing the destabilizing disappointment of expectations held in common."[37] At the same time, the concept of stewardship has become the hallmark of two international pilot projects—operated by environmental NGOs in cooperation with industry—for the use of economic instruments in natural resource management, in the form of "green" eco-labels for the global marketing of commodities claimed to be sustainably harvested: viz., timber products certified by the Forest Stewardship Council[38] and fishery products certified by the Marine Stewardship Council.[39] The topic, it seems, has ceased to be academic. Transnational civil society groups—emerging as powerful actors in the environmental arena[40]—are beginning to develop and invoke their own tangible criteria for holding public trustees accountable.

Environmental Trusteeship in International Law

How far, then, has the idea of public trusteeship for environmental resources progressed in the field of international law? To make things clear, I am *not* referring here to the "trust funds" frequently used as mechanisms to finance international environmental regimes and projects, such as the Global Environment Facility (GEF) for which the World Bank serves as trustee.[41] What is at stake here—as object of the trust (or *corpus,* in the jargon of trust law), and as object of the rules—are *not* financial assets, but the environmental resources themselves.

The idea of treating at least part of these resources as "inclusive" or "inter-

32. Brown 2000, 110; see Ciriacy-Wantrup and Bishop 1975, 725; and Scott 1999, 154.
33. Olson 1971; Russett and Sullivan 1971; Plott and Mayer 1975; Ostrom and Ostrom 1977; Sandler, Loehr, and Cauley 1978; Stone 1995; Cornes and Sandler 1996; Kaul, Grunberg, and Stern 1999; and Mitchell 1999.
34. Ostrom 1990. International lawyers tend to use the term "common property" in a spatial sense, to designate res communes situated in the global commons outside national jurisdiction only (e.g., Boyle 1997, 83); but see the different usage of the term (excluding "public goods") in natural resource economics (e.g., Ciriacy-Wantrup and Bishop 1975, 715).
35. Howarth and Norgaard 1990; Fukuyama 1995; and Kramer 1996.
36. Gambetta 1988; Ripperger 1998; and Noteboom 2002.
37. Sax 1980, 187.
38. Schmidt 1998.
39. Freestone and Makuch 1996, 48.
40. Princen and Finger 1994; Mathews 1997; Florini 2000; Slaughter 2000, 96; and Breitmeier and Rittberger 2000.
41. Sand 1994, 17.

nationally shared environment"[42] has, of course, a long tradition in international law—with regard to resources outside national jurisdiction, from *res communes omnium* to "common heritage" doctrines;[43] and with regard to certain "internal resources,"[44] from doctrines of *bon voisinage* to "shared natural resources."[45] Proposals to make use of the public trust doctrine in an international context date back to the 1893 Bering Sea Fur Seal Arbitration.[46] They re-surfaced during preparations for the 1972 UN Stockholm Declaration[47] and the UNESCO World Heritage Convention,[48] and have since been taken up by a number of international publicists,[49] especially in the legal debate on intergenerational equity.[50]

Various forms of "trusteeship," "guardianship," "custodianship" or "stewardship" status have thus been suggested for the marine environment in coastal waters and exclusive economic zones;[51] for continental shelf areas 60 to 120 miles beyond the EEZ;[52] for marine resources in specific regional seas such as the Mediterranean and the South Pacific;[53] for living ocean resources in general;[54] for Antarctica;[55] for the global atmosphere;[56] for all global commons;[57] for rain forests in Latin America;[58] for freshwater resources in the Middle East;[59] for genetic resources or biological resources generally;[60] or for all elements of the environment.[61] In two cases dealing with marine resource conservation, the Court of Justice of the European Union declared all member states "trustees of the common interest;"[62] and in a judgment interpreting the 1979 EU Bird Conservation Directive,[63] it considered wild birds "a case where the *management of*

42. McDougal and Schneider 1974, 1092; and Schneider 1979, 22.
43. Stocker 1993; and Baslar 1998.
44. Arsanjani 1981.
45. Adede 1979; and Barberis 1979.
46. Romano 2000, 133.
47. Sohn 1973, 457; and Maggio 1997, 203.
48. Gardner 1966, 154; and Train 1972.
49. Nanda and Ris 1976; Kiss 1982; Munro and Lammers 1987, 43; Glennon 1990, 34; Zaelke and Cameron 1990, 208; Kiss and Shelton 1991, 20; Bosselmann 1992, 385; Cho 1995, 332; and Caron 2000, 257.
50. Brown Weiss 1984, 1989; Agius and Busuttil 1997; Vibhute 1998, 71; Zanghi 1999; and Redgwell 1999.
51. Beesley 1973, 6; Jarman 1986; Archer and Jarman 1992; Hildreth 1993; and Britton 1997.
52. US Draft Seabed Convention 1970, articles 26–28; and also see Schmidt 1989, 27.
53. Raftopoulos 1992; and Fong 1993.
54. Van Dyke 1993; Mann Borgese 1996; Zharen 1998; and IWCO 1998, 45.
55. Suter 1991, 170.
56. Taylor 1998, 283.
57. Iwama 1992, 415; Cleveland 1993; Stone 1993, 83; and IUCN 2000, 148 ("by analogy to trusteeship rights").
58. Franck 1989, 541; and Tarlock 1997, 65.
59. Civic 1998.
60. De Klemm 1982, 124; Siebeck and Barton 1992; Mercure 1998, 64; Gebel 1998; and FOET 2001.
61. Kiss 1989, 19; and Bosselmann 2001, 22.
62. ECJ 1981, para. 30; and ECJ 1987, para. 15.
63. EEC 79/409.

the common heritage is entrusted to the member states in their respective territories."[64] More recently, in his much-quoted separate opinion in the 1997 Danube Dam case, Judge Christopher G. Weeramantry of the International Court of Justice referred to a "principle of trusteeship for earth resources."[65]

In July 1997, UN Secretary-General Kofi Annan proposed—in his report on governance reform[66]—that the United Nations Trusteeship Council

> be reconstituted as the forum through which Member States exercise their collective trusteeship for the integrity of the global environment and common areas such as the oceans, atmosphere and outer space. At the same time, it should serve to link the United Nations and civil society in addressing these areas of global concern, which require the active contribution of public, private and voluntary sectors.

The idea was not a new one. It had first been raised by Maurice Strong—legendary organizer of the Stockholm and Rio UN Conferences—in a 1988 speech to the World Federation of United Nations Associations in Halifax;[67] and by Maltese Foreign Minister Guido De Marco in his closing address as president of the 45th UN General Assembly in 1991.[68] Initial reactions were rather skeptical, mainly because changing the mandate of the Trusteeship Council would require an amendment of the UN Charter.[69] But Strong has a reputation for never taking "no" for an answer, and nobody was surprised therefore to see the idea re-surface in the report of the Commission on Global Governance (of which he was a member),[70] and later in the UN reform proposals (for which he served as consultant)—promptly endorsed by Malta's new head of state, law professor De Marco.[71]

The 1997 UN report was followed by a note from the Secretary-General on *The Concept of Trusteeship,*[72] which regrettably entrusted the question to the proverbial UN committee, the "Task Force on Environment and Human Settlements," chaired by the Executive Director of the UN Environment Program (UNEP). The task force report to the General Assembly in October 1998 refrained from making any recommendations on the trusteeship issue.[73] The buck was then passed to the "Open-ended Intergovernmental Group of Ministers on International Environmental Governance" launched by the UNEP Governing Council in February 2001, which predictably referred the matter to expert consultations, held in Cambridge, England, in May 2001; the experts concluded that "it would be very difficult to undertake measures that would affect the main

64. ECJ 1990, 885.
65. ICJ 1997, 213; see also Weeramantry 1992, 151.
66. UNSG 1997, para. 85.
67. Strong 1989, 20.
68. Borg 1992; and de Marco and Bartolo 1997.
69. Szasz 1992, 362.
70. CGG 1995, 251.
71. De Marco 1999 and 2001; see also Mann Borgese 1998, 164 and 195.
72. UNSG 1998a.
73. UNSG 1998b; see Agarwal, Narain, and Sharma 1999, 365; and Desai 2001, 486.

organs established by the United Nations Charter, like the ECOSOC and the Trusteeship Council."[74] As a result, the topic never even reached the agenda of the 2002 Johannesburg Summit.[75]

So is this just another one of those non-starters that periodically emerge in international institutions, only to die a slow "death by committee"? I do not think so; and I believe it is worth taking a closer look at the trusteeship idea, for a number of reasons.

Prolegomena of a Theory

In spite of the irritant amount of rhetoric surrounding it, the concept of public trusteeship is *not* a mere figure of speech or a utopian scenario, as some commentators and orators seem to assume. To begin with, the concept has respectable philosophical credentials: from the famous statement in John Locke's *Second Treatise on Civil Government* (1685), asserting that governments merely exercise a "fiduciary trust" on behalf of their people,[76] to the suggestion by Roscoe Pound to limit the role of states in the management of common natural resources to "a sort of guardianship for social purposes."[77] That comes remarkably close indeed to Karl Marx:[78]

> Even society as a whole, a nation, or all contemporary societies taken together, are not owners of the Earth. They are merely its occupants, its users; and as diligent guardians, must hand it down improved to subsequent generations.

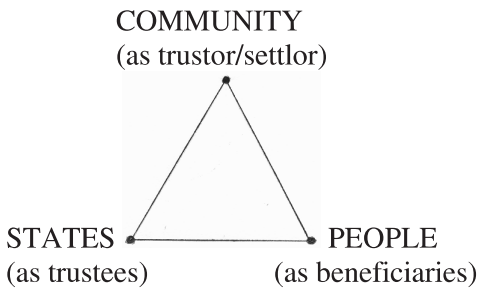
It seems to me that this fundamental political dimension of trusteeship is often neglected in purely juridical comparisons between Anglo-American trust law and other legal systems.[79] While it is true that the common law trust has historic parallels in European civil law (going back to the ancient Roman *fiducia* and *fideicommissum*), in the charitable *waqf* of Islamic law and in the *moramati* of African customary land law,[80] analogies from property law may not suffice to explain public trusteeship.

Another major source of misunderstandings is the frequent invocation of trust metaphors without juridical content—a usage already encountered in the literature on common *cultural* heritage, often labeled as "comparable to trusteeship in a *non-legal* sense."[81] In the environmental field as well, whenever ethical terms like "resource stewardship,"[82] "international/global steward-

74. Estrada Oyuela 2001, 1.
75. Sand 2002, 12.
76. Gough 1973; Dunn 1984; and Brown 1994.
77. Pound 1954, 111.
78. Marx 1865, 718.
79. Waters 1995; Helmholz and Zimmermann 1998; Hayton 1999; and Grundmann 1999.
80. Fratcher 1973, 108; Kenyatta 1978, 32; and Ollennu 1962, 4.
81. Stocker 1993, 123; and Genius-Devime 1996, 354.
82. Tarlock 1997, 66.

ship,"[83] "man's obligations as Earth's custodian,"[84] "man's stewardship or trustee responsibilities for Earth's natural resources and life systems"[85] are invoked as purely metaphorical formulations, the focus tends to be on *bilateral* duties owed by the present generation of humankind—as trustee—to future generations or "future humanity" as the beneficiaries.[86] Yet the legal structure of international public trusteeship is not a bilateral one, but typically *trilateral*,[87] as expressed in the following diagram:

Figure 1
International Environmental Trusteeship



Admittedly, this oversimplified model leaves a number of questions open for debate—starting with the definitions of the community concerned as *trustor/settlor* (the global community? or the community of members of specific international regimes; e.g., contracting parties to a multilateral convention?); of the sovereign entity concerned as *trustee* (states only? or also intergovernmental institutions acting in areas outside national jurisdiction; e.g., the UN International Seabed Authority?); of the people concerned as *beneficiaries* (present *and* future civil society? individuals *and* groups?); and of the *corpus* of the trust (designated resources only? or the global commons? or the whole environment?).

There are essentially three options for the creation of an international environmental trust:

(a) by a specific trust "deed" (*affectation*)[88] designating a particular resource to be conserved for a beneficial purpose; e.g., the "listing" of protected areas under the UNESCO World Heritage Convention, through a process of for-

83. Brown 1998; and Lucas, Beresford, and Aitchison 1998.
84. Caldwell 1973, 210.
85. Robinson 1975, 3.
86. Busuttil et al. 1990; Kiss 1997, 247; Gillespie 1997, 107; and Bubnoff 2001.
87. Sand 2001, 50; Sand 2003, 218.
88. Kiss 1982, 229. Significantly, if by coincidence, the French term for "trust funds" in UN terminology is fonds d'affectation; and see UN Doc. ST/SGB/Financial Rules/1/Rev.3 (1985), paras. 106.3–106.4.

mal nomination (by a host state) and conditioned acceptance (by a committee representing the member states), based on agreed criteria;[89]

(b) by a treaty designating an entire category of trust resources to be so conserved in all member states; e.g., the genetic resources included in Annex I of the FAO Plant Gene Treaty, subject to ratification by the *in situ* states concerned;[90] or

(c) arguably, by customary law or "objective" extension of a conventional trust regime to all states (*erga omnes*) regardless of their membership in the treaty, on the basis of objective natural criteria of the resource (*par nature*)[91]—which would presumably in turn require some kind of declaratory or customary specification of the international community's "common concern"[92]—e.g., for the deep seabed under the UN Law of the Sea Convention: common heritage "as a form of international trusteeship."[93]

Save for the last-mentioned hypothesis of an "objective regime" (which remains controversial),[94] the majority of international environmental trusts are likely to arise in one of the consensual forms described under options (a) and (b); hence, their legal effects will normally be limited to relations between parties to the multilateral regimes concerned. When defining the environmental resources of "common concern" envisaged as objects of a global trust—its *corpus,* as it were—the UN Trusteeship Council proposal seems to envisage the global commons in the first place;[95] however, as the examples of genetic bio-resources and cultural/natural heritage illustrate, "internal" resources situated *within* national jurisdiction could also be so designated if the community as trustor/settlor and the host state as trustee so agree. Hence the trusteeship status of a resource is not at all incompatible with the legitimate exercise of sovereign rights by a host state, just as—and here the analogy from trust law seems perfectly appropriate—a common law trustee has legitimate property rights over the *corpus,* always provided those rights are exercised in accordance with the interests of the beneficiary and with the terms of the trust.

Safeguarding the rights of beneficiaries is indeed a core function of environmental trusteeship. While the balance between a trustee's current use and long-term conservation of the resource is the key *economic* issue (converging in the "sustainable development" paradigm), public participation becomes the key *legal* issue.[96] In order to "enforce the terms of the trust against the trustee," as it were in common law parlance, this may require *procedural* safeguards—including actionable rights to know, rights to be heard, and rights to challenge

89. UNESCO 1972; and Lyster 1985, 211.
90. FAO/IT 2001.
91. Kiss 1982, 225.
92. Durner 2001, 291.
93. Boyle 1997, 84.
94. Simma 1994, 358.
95. UNSG 1997, 85; see also WBGU 2002.
96. Raustiala 1997; and Ebbesson 1997.

decisions, along the lines of the 1998 UNECE Aarhus Convention[97]—as well as *institutional* arrangements such as the empowerment of "guardians" with rights of standing and legal representation on behalf of civil society.[98] In the case of trusts operating in the context of conventional regimes—such as the UNESCO World Heritage Convention, or the Biodiversity Convention and the FAO Plant Gene Treaty—existing treaty institutions may have to be adapted accordingly. In the case of freestanding "objective" trusts operating outside treaty regimes, the proposed environmental mandate for a reconstituted UN Trusteeship Council might serve a useful residual purpose, also in the hypothesis of jurisdictional disputes between overlapping trusts. The "international community"[99] may even be said to have a responsibility towards the beneficiaries—that is, transnational civil society—to ensure that they can actually enforce the terms of the trust against trustee-states, through appropriate remedies and institutions; e.g., by the designation of representative civil bodies so as to overcome the "democratic deficit" of global governance.[100]

Conclusions

The broader question whether lessons learned from property rights and "fiduciary" institutions in a national environmental context can be extrapolated to the global environment has long intrigued not only international lawyers, but also Nobel laureates in economics.[101] Public trusteeship for environmental resources raises a problem of "scale": viz., the transferability of empirical generalizations and causal inferences from one level to another in the dimensions of space and time.[102] What I have tried to show is that a transfer of the public trust concept from the national to the global level is conceivable, feasible, and tolerable. It does *not* pose the "threats to sovereignty" imagined by ultra-conservative US political scientists, who have conjured up images of "the black helicopters of the United Nations" invading Yellowstone National Park to carry out field inspections under the World Heritage Convention.[103] Ironically, that treaty—which now has 176 member states—goes back to an initiative by the United States.[104] The essence of transnational environmental trusteeship, as embodied

97. UNECE 1998; see Petkova and Veit 2000; and Bruch and Czebiniak 2002.
98. Bruce and Holt 1977; Gassner 1984; Sands 1989, 417; Bruce 1990, 128; Stone 1993, 84; Sands 1997, 83; and IWCO 1998, 136.
99. Simma and Paulus 1998.
100. CGG 1995, 257; Crawford and Marks 1998; and Falk 2001, 165.
101. North 1999.
102. Young 2002.
103. Rabkin 1998, 46. The occasion was a 1995 visit to the Park (at the invitation of the US Government) by the UNESCO World Heritage Committee to hold hearings on potential threats to a "listed" protected area from a mining development project in an adjacent area. The incident prompted—unsuccessful—legislative proposals for an "American Land Sovereignty Protection Act" (H.R. 3752, 104th Cong. 2nd Sess. 1996), providing for congressional approval of all public land designations under international agreements (Gebert 1998).
104. Train 1972; and Meyer 1976.

in the convention, is the democratic *accountability* of states[105] for their management of trust resources in the interest of the beneficiaries—the world's "peoples," in Rawlsian terms.[106] The public trust concept thus reinforces, rather than weakens, the legitimacy of environmental governance by nation states. As Robert Keohane puts it,[107]

> in the long run global governance will only be legitimate if there is a substantial measure of external accountability. Global governance can impose limits on powerful states and other powerful organizations, but it also helps the powerful, because they shape the terms of governance.

National sovereignty, far from fading away through trusteeship,[108] may at least be "palishly" greening[109]—and that is nothing to apologize for.

References

Abbott, Gordon Jr. 1993. *Saving Special Places: A Centennial History of the Trustees of Reservations, Pioneers of the Land Trust Movement.* Ipswich, MA: The Trustees of Reservations.

Adede, Andronico O. 1979. Utilization of Shared Natural Resources. *Environmental Policy and Law* 5: 66–76.

Agarwal, Anil, Sunita Narain, and Anju Sharma, eds. 1999. *Green Politics: Global Environmental Negotiations 1.* New Delhi: Centre for Science and Environment.

Agius, Emmanuel, and Salvino Busuttil, eds. 1997. *Future Generations and International Law.* London: Earthscan.

Allott, Philip. 1989. *International Law and International Revolution: Reconceiving the World.* Hull: Hull University Press; reprinted in *Contemporary Issues in International Law:A Collection of the Josephine Onoh Memorial Lectures,* edited by David Freestone, Surya Subedi and Scott Davidson, 77–98. The Hague: Kluwer Law International 2002.

_____. 1990. *Eunomia: New Order for a New World.* Oxford: Oxford University Press.

Anderson, Michael R. 1998. International Environmental Law in Indian Courts. *Review of European Community and International Environmental Law* 7: 21–30.

Archer, Jack H., and M. Casey Jarman. 1992. Sovereign Rights and Responsibilities: Applying Public Trust Principles to the Management of EEZ Space and Resources. *Ocean and Coastal Management* 17: 253–271.

Arsanjani, Mahnoush H. 1981. *International Regulation of Internal Resources: A Study of Law and Policy.* Charlottesville, VA: UP Virginia.

Attard, David J., ed. 1991. *The Meeting of the Group of Legal Experts to Examine the Concept of the Common Concern of Mankind in Relation to Global Environmental Issues.* Nairobi: UNEP.

105. Jonas 1984, 36; Allott 1990, 336; Brown 1994, 142; and Redgwell 1999, 68.
106. Rawls 1999, 23.
107. Keohane 2002, 29.
108. Gebel 1998, 150.
109. Litfin 1998; Brenton 1994; Sands 1994; Agarwal, Narain, and Sharma 1999; and Cusimano 2000, 328.

Barberis, Julio A. 1979. *Los recursos naturales compartidos entre estados y el derecho internacional.* Madrid: Editorial Tecnos.

Baslar, Kemal. 1998. *The Concept of the Common Heritage of Mankind in International Law.* The Hague: Nijhoff.

Bates, Gerard M. 1995. *Environmental Law in Australia.* 4th ed. Sydney: Butterworths.

Beesley, J. Allan. 1973. The Canadian Approach to International Environmental Law. *Canadian Yearbook of International Law* 11: 3–12.

Bering Sea Fur Seal Arbitration. 1893. (Great Britain vs. USA, Paris, 15 August 1893). In *International Arbitrations 1*, edited by John B. Moore, 755 (1898). Washington, DC: US Government Printing Office.

Beyerlin, Ulrich. 1995. Staatliche Souveränität und internationale Umweltschutzkooperation: Gedanken zur Entwicklung des Umweltvölkerrechts. In *Recht zwischen Umbruch und Bewahrung: Festschrift für Rudolf Bernhardt,* edited by Ulrich Beyerlin, Michael Bothe, Rudolf Hofmann and Ernst U. Petersmann, 937–956. Berlin: Springer.

Bianchi, Andrea. 1997. Harm to the Environment in Italian Practice: The Interaction of International Law and Domestic Law. In *Harm to the Environment: The Right to Compensation and the Assessment of Damages,* edited by Peter Wetterstein, 103–109. Oxford: Clarendon.

Biermann, Frank. 1996. 'Common Concern of Humankind': The Emergence of a New Concept of International Environmental Law. *Archiv des Völkerrechts* 34: 426–481.

Biermann, Frank, Rainer Brohm, and Klaus Dingwerth, eds. 2002. *Global Environmental Change and the Nation State: Proceedings of the 2001 Berlin Conference on the Human Dimensions of Global Environmental Change.* Potsdam: Potsdam Institute for Climate Impact Research.

Bordwin, Harold J. 1985. The Legal and Political Implications of the International Undertaking on Plant Genetic Resources. *Ecology Law Quarterly* 12: 1053–1069.

Borg, Saviour. 1992. The Trusteeship Council as a Keeper of the Global Commons for Future Generations, and the Role of Diplomacy in Implementing Effective Environment Protection. In *Colloquium on the Legal Protection of the Environment Beyond the Limits of National Jurisdiction,* edited by David J. Attard. Malta: Mediterranean Academy of Diplomatic Studies.

Bosselmann, Klaus. 1992. *Im Namen der Natur: Der Weg zum ökologischen Rechtsstaat.* Bern: Scherz.

_____. 2001. *Incorporating Environmental Governance: A New Approach to Transnational Enforcement.* Report of the ILA Committee on Transnational Enforcement of Environmental Law. Washington, DC: Georgetown University Law Center.

Boyle, Alan E. 1997. Remedying Harm to International Common Spaces and Resources: Compensation and Other Approaches. In *Harm to the Environment: The Right to Compensation and the Assessment of Damages,* edited by Peter Wetterstein, 83–100. Oxford: Clarendon.

Breitmeier, Helmut, and Volker Rittberger. 2000. Environmental NGOs in an Emerging Global Civil Society. In *The Global Environment in the Twenty-first Century: Prospects for International Cooperation,* edited by Pamela S. Chasek, 130–163. Tokyo: United Nations University.

Brenton, Tony. 1994. *The Greening of Macchiavelli: The Evolution of International Environmental Politics.* London: Earthscan.

Britton, Douglas F. 1997. The Privatization of the American Fishery: Limitations, Recognitions, and the Public Trust. *Ocean and Coastal Law Journal* 3: 217–257.

Brown Weiss, Edith. 1984. The Planetary Trust: Conservation and Intergenerational Equity. *Ecology Law Quarterly* 11: 495–581.

_____. 1989. *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity.* Tokyo: United Nations University Press.

_____. 1993. International Environmental Law: Contemporary Issues and the Emergence of a New World Order. *Georgetown Law Journal* 81: 675–710.

Brown, Jessica L. 1998. Stewardship: An International Perspective. *Environments: A Journal of Interdisciplinary Studies* 26 (1): 8–17.

Brown, Peter G. 1994. *Restoring the Public Trust: A Fresh Vision for Progressive Government in America.* Boston: Beacon Press.

_____. 2000. *Ethics, Economics and International Relations: Transparent Sovereignty in the Commonwealth of Life.* Edinburgh: Edinburgh University Press.

Bruce, Maxwell, and Sidney Holt. 1977. *A World Guardian for the Future.* Malta: International Ocean Institute.

Bruch, Carl, and Roman Czebiniak. 2002. Globalizing Environmental Governance: Making the Leap from Regional Initiatives on Transparency, Participation, and Accountability in Environmental Matters. *Environmental Law Reporter* 32: 10428–10453.

Brunnée, Jutta. 1989. 'Common Interest': Echoes from an Empty Shell? Some Thoughts on Common Interest and International Environmental Law. *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* (*Heidelberg Journal of International Law*) 49: 791–808.

Bubnoff, Daniela von. 2001. *Der Schutz der künftigen Generationen im deutschen Umweltrecht: Leitbilder, Grundsätze und Instrumente eines dauerhaften Umweltschutzes.* Bielefeld: Erich Schmidt Verlag.

Busuttil, Salvino, Emmanuel Agius, Peter S. Inglott, and Tony Macelli, eds. 1990. *Our Responsibilities Towards Future Generations: A Programme of UNESCO and the International Environment Institute.* Malta: Foundation for International Studies.

Caldwell, Lynton K. 1973. Concepts in Development of International Environmental Policies. *Natural Resources Journal* 13: 190–212; reprinted in *International Environmental Law,* edited by Ludwik Teclaff and Albert E. Utton, 12–24. New York: Praeger 1974.

_____. 1996. *International Environmental Policy: From the Twentieth to the Twenty-First Century.* 3rd ed. Durham, NC: Duke University Press.

Camilleri, Joseph A., and Jim Falk. 1992. *The End of Sovereignty? The Politics of a Shrinking and Fragmenting World.* Aldershot: Elgar.

Caron, David D. 2000. The Place of the Environment in International Tribunals. In *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives,* edited by Jay E. Austin and Carl E. Bruch, 250–263. Cambridge, UK: Cambridge University Press.

Carty, Anthony. 1986. *The Decay of International Law? A Reappraisal of the Limits of Legal Imagination in International Affairs.* Manchester: Manchester University Press.

CBD. 1992. Convention on Biological Diversity, signed at the United Nations Conference on Environment and Development (Rio de Janeiro, 5 June 1992). *International Legal Materials* 31: 818.

CGG. 1995. *Report of the Commission on Global Governance. Our Global Neighbourhood*. Oxford: Oxford University Press.

Chayes, Abram, and Antonia H. Chayes. 1995. *The New Sovereignty: Compliance with Treaties in International Regulatory Regimes.* Cambridge, MA: Harvard University Press.

Chesterman, Michael R. 1979. *Charities, Trusts and Social Welfare.* London: Weidenfeld and Nicolson.

Chimni, B. S. 1998. The Principle of Permanent Sovereignty Over Natural Resources: Toward a Radical Interpretation. *Indian Journal of International Law* 38: 208–217.

Cho, Hong Sik. 1995. The Public Trust Doctrine and Global Commons. J.S.D. dissertation, Berkeley: University of California, Boalt Hall School of Law.

Ciriacy-Wantrup, Siegfried von, and Richard C. Bishop. 1975. "Common Property" as a Concept in Natural Resources Policy. *Natural Resources Journal* 15: 713–727.

Civic, Mélanne A. 1998. A New Conceptual Framework for Jordan River Management: A Proposal for a Trusteeship Commission. *Colorado Journal of International Environmental Law and Policy* 9: 285–329.

Clark, William C., Jill Jäger, and Josee van Eijndhoven, eds. 2001. *Learning to Manage Global Environmental Risks.* Cambridge, MA: MIT Press.

Cleveland, Harlan. 1993. The Global Commons: A Global Commons Trusteeship Commission Is Needed to Guide Our Use of the Oceans, Antarctica, the Atmosphere, and Outer Space. *The Futurist* (May-June 1993): 9–13.

Conca, Ken. 1994. Rethinking the Ecology-Sovereignty Debate. *Millennium* 23: 701–711.

Cooper, H. David. 2002. The International Treaty on Plant Genetic Resources for Food and Agriculture. *Review of European Community and International Environmental Law* 11: 1–16.

Cornes, Richard, and Todd Sandler. 1996. *The Theory of Externalities, Public Goods and Club Goods,* 2nd ed. Cambridge, UK: Cambridge University Press.

Crawford, James, and Susan Marks. 1998. The Global Democracy Deficit: An Essay in International Law and Its Limits. In *Re-Imagining Political Community: Studies in Cosmopolitan Democracy,* edited by Daniele Archibugi and David Held, 72–90. Stanford, CA: Stanford University Press.

Cusimano, Maryann K., ed. 2000. *Beyond Sovereignty: Issues for a Global Agenda*. Boston: Bedford, St.Martin's.

Czempiel, Ernst-Otto, ed. 1969. Die anachronistische Souveränität: Zum Verhältnis von Innen- und Außenpolitik. *Politische Vierteljahresschrift* (Special Issue) 10: 1. Cologne: Westdeutscher Verlag.

Davis, George D. 1987. *Developing a Land Conservation Strategy: A Handbook for Land Trusts.* Elizabethtown, NY: Adirondack Land Trust 1987.

De Klemm, Cyril. 1982. Conservation of Species: The Need for a New Approach. *Environmental Policy and Law* 9: 117–128.

De Marco, Guido. 1999. A Renewed Trusteeship Council: Guardian of Future Generations, 1st Arvid Pardo Memorial Lecture. Proceedings of Pacem in Maribus XXVII. Suva, Fiji: International Ocean Institute.

_____. 2001. Ideas and Ideals of UN Reform (Address to the Foreign Affairs College in Beijing, 2 July 2001). Malta Department of Information: Press Release 1003.

De Marco, Guido, and Michael Bartolo. 1997. *Second Generation United Nations: For Peace in Freedom in the 21st Century.* London: Kegan Paul International.

Delgado, Richard. 1991. Our Better Natures: A Revisionist View of Joseph Sax's Public Trust Theory of Environmental Protection, and Some Dark Thoughts on the Possibility of Law Reform. *Vanderbilt Law Review* 44: 1209–1227.

Dernbach, John C. 1999. Taking the Pennsylvania Constitution Seriously When it Protects the Environment, Part II: Environmental Rights and Public Trust. *Dickinson Law Review* 104: 97–164.

Desai, Bharat H. 2001. Revitalizing International Environmental Institutions: The UN Task Force Report and Beyond. *Indian Journal of International Law* 40: 455–504.

Dolowitz, David P., and David Marsh. 2000. Learning From Abroad: The Role of Policy Transfer in Contemporary Policy Making. *Governance* 13: 5–24.

Dunn, John. 1984. The Concept of 'Trust' in the Politics of John Locke. In *Philosophy in History,* edited by Richard Rorty, 279–301. Cambridge, UK: Cambridge University Press, 279–301.

Dunning, Harrison C. 1989. The Public Trust: A Fundamental Doctrine of American Property Law. *Environmental Law* 19: 515–525.

Durner, Wolfgang. 2001. *Common Goods: Statusprinzipien von Umweltgütern im Völkerrecht.* Baden-Baden: Nomos.

Dwyer, Janet, and Ian Hodge. 1996. *Countryside in Trust: Land Management by Conservation, Recreation, and Amenity Organizations.* Chichester: Wiley 1996.

Ebbesson, Jonas. 1997. The Notion of Public Participation in International Environmental Law. *Yearbook of International Environmental Law* 8: 51–97.

ECJ. 1981. European Commission vs. United Kingdom, European Court of Justice, C-804/79 (5 May 1981), European Court Reports [1981] 1: 1045.

_____. 1987. Ireland vs. European Commission, European Court of Justice, C-325/85, European Court Reports [1987] 3: 5041.

_____. 1990. European Commission vs. The Netherlands, European Court of Justice, C-339/87 (15 March 1990), European Court Reports [1990] 1: 851; Common Market Law Reports [1993] 2: 360.

_____. 1991. European Commission vs. Germany (Leybucht case), European Court of Justice, C-57/89 (28 February 1991), European Court Reports [1991] 1: 383.

Eckert, Ross D. 1979. *The Enclosure of Ocean Resources: Economics and the Law of the Sea.* Stanford: Hoover.

EEC 79/409. Council Directive of the European Union of 2 April 1979 (79/409/EEC) on the Conservation of Wild Birds, Official Journal of the European Communities [1979] L: 103, 1.

ELQ. 1998. Symposium on 'Takings, Public Trust, Unhappy Truths, and Helpless Giants': A Review of Professor Joseph Sax's Defense of the Environment Through Academic Scholarship. *Ecology Law Quarterly* 25: 325–438.

Eritrean Environment Proclamation. 1996. In *Compendium of Environmental Laws of African Countries I* (1st Supplement, December 1997), Nairobi: UNEP/UNDP Joint Project on Environmental Law and Institutions in Africa, 44–69.

Estrada Oyuela, Raúl. 2001. Expert Consultations on International Environmental Governance (Cambridge, May 28–29, 2001): Chairman's Summary. Nairobi: UNEP IEG Working Document.

Fairfax Sally K., and Darla Guenzler. 2001. *Conservation Trusts.* Lawrence, KS: University Press of Kansas.

Falk, Richard A. 1971. *This Endangered Planet: Prospects and Proposals for Human Survival.* New York: Vintage Books.

_____. 1975. *A Study of Future Worlds.* New York: Free Press.

_____. 1995. Environmental Protection in an Era of Globalization. *Yearbook of International Environmental Law* 6: 3–25.

_____. 2001. A Decade of Lost Opportunities. *Proceedings of the American Society of International Law* 95: 164–166.

FAO/IT. 2001. International Treaty on Plant Genetic Resources for Food and Agriculture, adopted by Conference Resolution 3/01 of the Food and Agriculture Organization of the United Nations, Rome, 3 November 2001. Available at www.ukabc.org/ITPGRe.pdf.

FAO/IU. 1983. International Undertaking on Plant Genetic Resources, adopted by Conference Resolution 8/83 of the Food and Agricultural Organization of the United Nations, Rome, 23 November 1983. Available at www.fao.org/AG/cgrfa/IU.htm.

Florini, Ann M. 2000. *The Third Force: The Rise of Transnational Civil Society.* Washington, DC: Carnegie Endowment for International Peace.

FOET. 2001. Foundation on Economic Trends. Draft Treaty to Share the Genetic Commons. Washington, DC: FOET; reprinted in *South Letter* 2 (37): 29–30.

Fong, Gracie. 1993. Governance and Stewardship of the Living Resources: The Work of the South Pacific Forum Fisheries Agency. In *Freedom for the Seas in the 21st Century: Ocean Governance and Environmental Harmony,* edited by Jon M. van Dyke, Durwood Zaelke and Grant Hewison, 131–141. Washington, DC: Island Press.

Franck, Thomas M. 1989. Soviet Initiatives, U.S. Responses: New Opportunities for Reviving the United Nations System. *American Journal of International Law* 83: 531–542.

Fratcher, William F. 1973. Trust. In *International Encyclopedia of Comparative Law* 6: 11, 84–141. Tübingen: Mohr.

Freestone, David, and Zen Makuch. 1996. The New International Environmental Law of Fisheries: The 1995 United Nations Straddling Stocks Agreement. *Yearbook of International Environmental Law* 7: 3–51.

Fukuyama, Francis. 1995. *Trust: The Social Virtues and the Creation of Prosperity.* New York: Free Press.

Gambetta, Diego, ed. 1988. *Trust: Making and Breaking Cooperative Relations.* New York: Blackwell.

Gardner, Richard N., ed. 1966. *Blueprint for Peace.* New York: McGraw Hill.

Gebel, Titus. 1998. *Der Treuhandgedanke und die Bewahrung der biologischen Vielfalt: Einschränkung der territorialen Souveränität durch treuhänderische Verwaltung von lebenden Umwelt-Ressourcen.* Sinzheim: Pro Universitate.

Gebert, Daniel L. 1998. Sovereignty Under the World Heritage Convention: A Questionable Basis for Limiting the Federal Land Designation Pursuant to International Agreements. *Southern California Interdisciplinary Law Journal* 7: 427–444.

Genius-Devime, Barbara. 1996. *Bedeutung und Grenzen des Erbes der Menschheit im völkerrechtlichen Kulturgüterschutz.* Baden-Baden: Nomos.

Gillespie, Alexander. 1997. *International Environmental Law, Policy and Ethics.* Oxford: Clarendon.

Glennon, Michael J. 1990. Has International Law Failed the Elephant? *American Journal of International Law* 84: 1–43.

Gough, John W. 1973. Political Trusteeship. In *John Locke's Political Philosophy,* edited by John W. Gough, 154–192. Oxford: Clarendon.

Gould, Peter R. 1969. *Spatial Diffusion.* Washington, DC: Association of American Geographers.

Grundmann, Stefan. 1999. Trust and Treuhand at the End of the 20th Century: Key Problems and Shift of Interests. *American Journal of Comparative Law* 47: 401–428.

Haas, Peter M., and Jan Sundgren. 1993. Evolving International Environmental Law: Changing Practices of National Sovereignty. In *Global Accord: Environmental Challenges and International Responses,* edited by Nazli Choucri, 401–429. Cambridge, MA: MIT Press, 401–429.

Haedrich, Martina. 2000. Internationaler Umweltschutz und Souveränitätsverzicht: Eine Untersuchung zum Wandel des Souveränitätsverständnisses. *Der Staat* 39: 547–569.

Hägerstrand, Torsten. 1967. *Innovation Diffusion as a Spatial Process.* Chicago: University of Chicago Press.

Hayton, David, ed. 1999. *Modern International Developments in Trust Law.* The Hague: Kluwer Law International.

Helmholz, Richard H., and Richard Zimmermann, eds. 1998. *Itinera Fiduciae: Trust and Treuhand in Historical Perspective.* Berlin: Duncker and Humblot.

Henkin, Louis. 1994. The Mythology of Sovereignty. In *Essays in Honour of Wang Tieya,* edited by Ron St. J. MacDonald, 351–358. Dordrecht: Nijhoff.

Hildreth, Richard G. 1993. The Public Trust Doctrine and Coastal and Ocean Resources Management. *Journal of Environmental Law and Litigation* 8: 221–236.

Hillmo, Thomas, and Ulrik Lohm. 1997. Nature's Ombudsmen: The Evolution of Environmental Representation in Sweden. *Environment and History* 3: 19–43.

Hinds, Caroline. 1997. *Umweltrechtliche Einschränkungen der Souveränität: Völkerrechtliche Präventionspflichten zur Verhinderung von Umweltschäden.* Frankfurt: Lang.

Hoel, Alf H. 2000. Performance of Exclusive Economic Zones. *IDGEC Scoping Report* 2. Hanover, NH: Dartmouth.

Howarth, Richard B., and Richard B. Norgaard. 1990. Intergenerational Resource Rights, Efficiency, and Social Optimality. *Land Economics* 66: 1–11.

ICJ. 1997. International Court of Justice, Judgement in the Case Concerning the Gabcíkovo-Nagymaros Project (Hungary vs. Slovakia, Danube Dam case), ICJ Reports [1997], 1–72; *International Legal Materials* 37: 204–216.

Illinois Central Railroad vs. People of the State of Illinois, U.S. Supreme Court (5 December 1892), 146 U.S. 387.

IUCN. 2000. International Union for Conservation of Nature and Natural Resources. Draft International Covenant on Environment and Development. *IUCN Environmental Policy and Law Paper* 31/Rev. 2nd ed. Gland: IUCN.

Iwama, Toru. 1992. Emerging Principles and Rules for the Prevention and Mitigation of Environmental Harm. In *Environmental Change and International Law: New Challenges and Dimensions,* edited by Edith Brown Weiss, 107–123. Tokyo: UN University Press.

IWCO. 1998. *The Ocean: Our Future.* Report of the Independent World Commission on the Oceans. Cambridge, UK: Cambridge University Press.

Jänicke, Martin. 2002. No Withering Away of the Nation State: Ten Theses on Environmental Policy. In *Global Environmental Change and the Nation State: Proceedings of*

the 2001 Berlin Conference on the Human Dimensions of Global Environmental Change, edited by Frank Biermann, Rainer Brohm and Klaus Dingwerth, 134–138. Potsdam: Potsdam Institute for Climate Impact Research.

Jarman, M. Casey. 1986. The Public Trust Doctrine in the Exclusive Economic Zone. *Oregon Law Review* 65: 1–33.

Johannesburg Summit. 2002. Report of the World Summit on Sustainable Development (Johannesburg, South Africa, 26 August–4 September 2002), UN Doc. A/CONF. 199/20 , New York: United Nations.

Jonas, Hans. 1984. *Das Prinzip Verantwortung: Versuch einer Ethik für die technologische Zivilisation.* Frankfurt: Insel Verlag; English transl. 1984. *The Imperative of Responsibility: In Search of an Ethics for the Technology Age.* Chicago: University of Chicago Press.

Kaul, Inge, Isabelle Grunberg, and Marc A. Stern, eds. 1999. *Global Public Goods: International Cooperation in the 21st Century.* Oxford: Oxford University Press.

Kenyatta, Jomo. 1978. *Facing Mount Kenya: The Traditional Life of the Gikuyu.* London: Secker and Warburg; reprint of 1938 ed. Nairobi: Heinemann.

Keohane, Robert O. 2002. *Global Governance and Democratic Accountability.* London School of Economics: Milliband Lecture.

Kern, Kristine, and Martin Jänicke. 2001. *The Diffusion of Environmental Policy Innovations.* WZB/FS II 01–302, Berlin: Wissenschaftszentrum Berlin für Sozialforschung.

Kiss, Alexandre C. 1982. La notion de patrimoine commun de l'humanité. *Hague Academy of International Law: Recueil des Cours* 175: 109–256.

_____. 1989. *Droit international de l'environnement.* Paris: Pedone.

_____. 1992. Comments. In *Environmental Change and International Law: New Challenges and Dimensions,* edited by Edith Brown Weiss, 13–14. Tokyo: UN University Press.

_____. 1997. The Common Concern of Mankind. *Environmental Policy and Law* 27: 244–247.

Kiss, Alexandre C., and Dinah Shelton. 1991. *International Environmental Law.* Ardsley, NY: Transnational Publishers.

Kornicker-Uhlmann, Eva M. 1998. State Community Interests, Ius Cogens and Protection of the Global Environment: Developing Criteria for Peremptory Norms. *Georgetown International Environmental Law Review* 11: 101–135.

Kramer, Roderick M. 1996. Trust-Based Forms of Governance. In *Trust in Organizations: Frontiers of Theory and Research,* edited by Roderick M. Kramer and Tom R. Tyler, 51–67. Thousand Oaks, CA: Sage.

Krasner, Stephen D. 1999. *Sovereignty: Organized Hypocrisy.* Princeton, NJ: Princeton University Press.

Kreijen, Gerard, ed. 2001. *The Changing Concept of Sovereignty in International Law.* Oxford: Oxford University Press.

La Viña, Antonio G. M. 1994. The Right to a Sound Environment: The Significance of the Minors Oposa Case. *Review of European Coummunity and International Environmental Law* 3: 247–252.

Lazarus, Richard J. 1986. Changing Concepts of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine. *Iowa Law Review* 71: 631–716.

Litfin, Karen T., ed. 1998. *The Greening of Sovereignty in World Politics.* Cambridge, MA: MIT Press.

LOS. 1982. Convention on the Law of the Sea, adopted by the 3rd United Nations Conference on the Law of the Sea (Montego Bay, Jamaica, 10 December 1982); *International Legal Materials* 21: 1261.

Lucas, Percy H. C., Michael Beresford, and John Aitchison. 1998. Protected Landscapes: Global and Local Stewardship. *Environments: A Journal of Interdisciplinary Studies* 26 (1): 18–26.

Lyster, Simon. 1985. *International Wildlife Law: An Analysis of International Treaties Concerned with the Conservation of Wildlife.* Cambridge: Grotius Publications.

Maggio, Gregory F. 1997. Inter/intra-generational Equity: Current Applications under International Law for Promoting the Sustainable Development of Natural Resources. *Buffalo Environmental Law Journal* 4: 161–223.

Maguire, John C. 1997. Fashioning an Equitable Vision for Public Resource Protection and Development in Canada: The Public Trust Doctrine Revisited and Reconceptualized. *Journal of Environmental Law and Practice* 7: 1–42.

Mann Borgese, Elisabeth. 1996. *Ocean Governance and the United Nations.* 2nd rev. ed. Halifax: Dalhousie University.

_____. 1998. *The Oceanic Circle: Governing the Sea as a Global Resource.* Tokyo: UN University Press.

Marx, Karl. 1865 (Engels, Friedrich, ed. 1984). Das Kapital, Vol. 3. In Marx, Karl *Ökonomische Manuskripte 1863–1867*, Marx-Engels-Gesamtausgabe (MEGA), edited by Internationale Marx-Engels-Stiftung. Part II, Vol. 4 (1992). Berlin: Dietz.

Mathews, Jessica T. 1997. Power Shift. *Foreign Affairs* 76 (1): 50–66.

Mayer-Tasch, Peter C. 1985. Die internationale Umweltpolitik als Herausforderung für die Nationalstaatlichkeit. *Das Parlament: Aus Politik und Zeitgeschichte* 20: 3–13.

McDougal, Myres S., and Jan Schneider. 1974. The Protection of the Environment and World Public Order: Some Recent Developments. *Missouri Law Journal* 45: 1085–1124.

Mehta vs. Kamal Nath et al. Supreme Court of India, decision of 13 December 1996, (1997) 1 SSC 388; reprinted in the 1998 UNEP/UNDP *Compendium of Judicial Decisions on Matters Related to Environment: National Decisions.* Nairobi: United Nations Environment Programme 1: 259–274.

Mekouar, A. 2002. Treaty Agreed on Agrobiodiversity: The International Treaty on Plant Genetic Resources for Food and Agriculture. *Environmental Policy and Law* 32, 20–25.

Mercure, Pierre F. 1998. La proposition d'un modèle de gestion intégrée des ressources naturelles communes de l'humanité. *Canadian Yearbook of International Law* 36: 41–92.

Merryman, John H. 1983. International Art Law: From Cultural Nationalism to a Common Heritage of Mankind. *New York University Journal of International Law and Politics* 15: 757–763.

Meyer, Robert L. 1976. Travaux Préparatoires for the UNESCO World Heritage Convention. *Earth Law Journal* 2: 45–81.

Michigan Environmental Protection Act, Public Act No. 127 of 27 July 1970, *Michigan Law Review* 70 (1972): 1004.

Minors Oposa vs. Factoran 1993 = Supreme Court of the Philippines (30 July 1993), G.R. No. 101083; *International Legal Materials* 33 (1994): 168.

Mitchell, Ronald B. 1999. International Environmental Common Pool Resources: More Common Than Domestic But More Difficult to Manage. In *Anarchy and the Environment: The International Relations of Common Pool Resources,* edited by J. Samuel Barkin and George E. Shambaugh, 26–50. Albany: State University of New York Press.

Monden, Anneliese, and Geert Wils. 1986. Art Objects as Common Heritage of Mankind. *Revue belge de droit international* 19: 327–338.

Munro, Robert D., and Johan G. Lammers, eds. 1987. *Environmental Protection and Sustainable Development: Legal Principles and Recommendations.* Report of the Experts Group on Environmental Law of the World Commission on Environment and Development (Brundtland Commission). Dordrecht: Nijhoff.

Nanda, Ved P., and William K. Ris Jr. 1976. The Public Trust Doctrine: A Viable Approach to International Environmental Protection. *Ecology Law Quarterly* 5: 291–319.

North, Douglass C. 1999. Dealing with a Non-Ergodic World: Institutional Economics, Property Rights, and the Global Environment. *Duke Environmental Law and Policy* Forum 10: 1–12.

Nooteboom, Bart. 2002. *Trust: Forms, Foundations, Functions, Failures and Figures.* Cheltenham: Edward Elgar.

Odendahl, Kerstin. 1998. *Die Umweltpflichtigkeit der Souveränität: Reichweite und Schranken territorialer Souveränitätsrechte über die Umwelt und die Notwendigkeit eines veränderten Verständnisses staatlicher Souveränität.* Berlin: Duncker and Humblot.

Oil Pollution Act, U.S. Public Law No. 101–380 of 18 August 1990, United States Code 33: 2701.

Ollennu, Nii A. 1962. *Principles of Customary Land Law in Ghana.* London: Sweet and Maxwell.

Olson, Mancur Jr. 1971. *The Logic of Collective Action: Public Goods and the Theory of Groups.* Revised edition. Cambridge, MA: Harvard University Press.

Orrego Vicuña, Francisco. 1989. *The Exclusive Economic Zone: Regime and Legal Nature under International Law.* Cambridge, UK: Cambridge University Press.

Orrego Vicuña, Francisco, and Louis B. Sohn. 1997. Report and Comments on Responsibility and Liability under International Law for Environmental Damage. *Annuaire de l'Institut de Droit International* 67-I: 288, 341.

Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action.* Cambridge, UK: Cambridge University Press.

Ostrom, Vincent, and Elinor Ostrom. 1977. Public Goods and Public Choices. In *Alternatives for Delivering Public Services,* edited by Emanuel S. Savas, 7–49. Boulder: Westview Press.

Page, Talbot. 1997. On the Problem of Achieving Efficiency and Equity, Intergenerationally. *Land Economics* 73: 580–596.

Pennsylvania Constitution, in: Purdon's Pennsylvania Statutes Annotated 2002, St. Paul, MN: West.

Perrez, Franz Xaver. 2000. *Cooperative Sovereignty: From Independence to Interdependence in the Structure of International Environmental Law.* The Hague: Kluwer Law International.

Petkova, Elena, and Peter G. Veit. 2000. *Environmental Accountability Beyond the Nation State: The Implications of the Aarhus Convention.* Washington, DC: World Resources Institute.

Philippine Environmental Policy, Presidential Decree No. 1151 (6 June 1977); *International Digest of Health Legislation* 29 (1978): 420.

Plott, Charles R., and Robert A. Meyer. 1975. The Technology of Public Goods, Externalities, and the Exclusion Principle. In *Economic Analysis of Environmental Problems,* edited by Edwin S. Miller, 65–94. New York: Columbia University Press.

Pound, Roscoe. 1954. *An Introduction to the Philosophy of Law.* Revised edition (of 1922 ed.) New Haven, CT: Yale University Press.

Princen, Thomas, and Matthias Finger. 1994. *Environmental NGOs in World Politics: Linking the Local and the Global.* London: Routledge.

Rabkin, Jeremy A. 1998. Why Sovereignty Matters. *AEI Studies on Global Environmental Policy.* Washington, DC: American Enterprise Institute.

Raftopoulos, Evangelos. 1992. The Barcelona Convention System for the Protection of the Mediterranean Sea against Pollution: An International Trust at Work. *International Journal of Estuarine and Coastal Law* 7: 27–41.

Raustiala, Kal. 1997. The 'Participatory Revolution' in International Environmental Law. *Harvard Environmental Law Review* 21: 537–586.

Rawls, John. 1999. *The Law of Peoples.* Cambridge, MA: Harvard University Press.

Razzaque, Jona. 2001. Application of Public Trust Doctrine in Indian Environmental Cases. *Journal of Environmental Law* 13: 221–234.

Redgwell, Catherine. 1999. *Intergenerational Trusts and Environmental Protection.* Manchester: Manchester University Press.

Ripperger, Tanja. 1998. *Ökonomik des Vertrauens: Analyse eines Organizationsprinzips.* Tübingen: Mohr Siebeck.

Robinson, Nicholas A. 1975. Editorial: Stewardship and this New Journal. *Earth Law Journal* 1: 3–4.

Romano, Cesaro P. R. 2000. *The Peaceful Settlement of International Environmental Disputes: A Pragmatic Approach.* The Hague: Kluwer Law International.

Rose, Carol M. 1986. The Comedy of the Commons: Custom, Commerce, and Inherently Public Property. *University of Chicago Law Review* 53: 711–781.

Ryan, Erin. 2001. Public Trust and Distrust: The Theoretical Implications of the Public Trust Doctrine for Natural Resource Management. *Environmental Law* 31: 477–496.

Sand, Peter H. 1990. *Lessons Learned in Global Environmental Governance.* Washington, DC: World Resources Institute.

_____. 1994. Trusts for the Earth: New Financial Mechanisms for International Environmental Protection. 10th Onoh Memorial Lecture, Hull: University of Hull Press; reprinted in *Sustainable Development and International Law,* edited by Winfried Lang, 167–184. London: Graham and Trotman/Nijhoff 1995; and in *Contemporary Issues in International Law: A Collection of the Josephine Onoh Memorial Lectures,* edited by David Freestone and Surya P. Subedi, 161–184. The Hague: Kluwer Law International 2002.

_____. 2001. A Century of Green Lessons: The Contribution of Nature Conservation Regimes to Global Governance. *International Environmental Agreements: Politics, Law and Economics* 1: 33–72; abridged version in *Managing Global Issues: Lessons Learned,* edited by P. J. Simmons and Chantal de Jonge Oudraat, 281–309. Washington, DC: Carnegie Endowment for International Peace.

_____. 2002. Environmental Summitry and International Law. *Yearbook of International Environmental Law* 13: 3–15.

_____. 2003. Trusteeship for Common Pool Resources? Zur Renaissance des Treuhandbegriffs im Umweltvölkerrecht. In *Praxis-Handbuch UNO: Die Vereinten Nationen im Lichte globaler Herausforderungen,* edited by Sabine von Schorlemer, 201–224. Berlin: Springer.

Sandler, Todd M., William Loehr, and Jon T. Cauley. 1978. *The Political Economy of Public Goods and International Cooperation.* Denver, CO: University of Denver.

Sands, Philippe J., ed. 1994. *Greening International Law.* New York: New Press.

Sands, Philippe J. 1989. The Environment, Community and International Law. *Harvard International Law Journal* 30: 393–420.

_____. 1997. Protecting Future Generations: Precedents and Practicalities. *Agius and Busuttil* 1997, 83–91.

Sax, Joseph L. 1970. The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention. *Michigan Law Review* 68: 471–556.

_____. 1980. Liberating the Public Trust Doctrine from its Historical Shackles. *University of California-Davis Law Review* 14: 185–194.

Scelle, Georges. 1958. Obsession du territoire. In *Symbolae Verzijl,* edited by Frederick M. van Asbeck, 347–361. The Hague: Nijhoff.

Schmidt, Eleonore. 1998. The Forest Stewardship Council: Using the Market to Promote Responsible Forestry. *Yearbook of International Co-operation on Environment and Development,* 7th ed. London: Earthscan, 23–27.

Schmidt, Markus G. 1989. *Common Heritage or Common Burden ? The United States Position on the Development of a Regime for Deep Sea-Bed Mining in the Law of the Sea Convention.* Oxford: Clarendon.

Schneider, Jan. 1979. *World Public Order of the Environment: Towards an International Ecological Law and Organization.* Toronto: University of Toronto Press.

Schreuer, Christoph. 1993. The Waning of the Sovereign State: Towards a New Paradigm for International Law? *European Journal of International Law* 4: 447–471.

Schrijver, Nico. 1997. *Sovereignty Over Natural Resources: Balancing Rights and Duties.* Cambridge, UK: Cambridge University Press.

_____. 2000. The Changing Nature of State Sovereignty. *British Yearbook of International Law* 70: 65–78.

Scott, Anthony. 1999. Trust Law, Sustainability, and Responsible Action. *Ecological Economics* 31: 139–154.

Siebeck, Wolfgang E., and John H. Barton. 1992. The Implications of Applying the Legal Concept of Trust to Germplasm Collections at CGIAR Research Centers. *Diversity* 8 (3): 29–35.

Simma, Bruno. 1994. From Bilateralism to Community Interest in International Law. *Hague Academy of International Law: Recueil des Cours* 250, 217–384.

Simma, Bruno, and Andreas L. Paulus. 1998. The 'International Community': Facing the Challenge of Globalization. *European Journal of International Law* 9: 266–277.

Slade, David C. 1990. *Putting the Public Trust to Work.* Washington, DC: Coastal States Association.

Slaughter, Anne-Marie. 2000. International Law and International Relations. *Hague Academy of International Law: Recueil des Cours* 285: 1–249.

Sohn, Louis B. 1973. The Stockholm Declaration on the Human Environment. *Harvard International Law Journal* 14: 423–515.

Sprout, Harold, and Margaret Sprout. 1971. *Towards a Politics of the Planet Earth.* New York: Van Nostrand Reinhold.

Stocker, Werner. 1993. *Das Prinzip des Common Heritage of Mankind als Ausdruck des Staatengemeinschaftsinteresses im Völkerrecht.* Zürich: Schulthess.

Stockholm Declaration. Declaration adopted by the United Nations Conference on the Human Environment (Stockholm, 16 June 1972), UN Doc. A/Conf.48/14; *International Legal Materials* 11: 1416.

Stone, Christopher D. 1993. *The Gnat is Older than Man: Global Environment and Human Agenda.* Princeton, NJ: Princeton University Press.

_____. 1995. What To Do About Diversity: Property Rights, Public Goods, and the Earth's Biological Riches. *Southern California Law Review* 68: 577–588.

Strong, Maurice F. 1989. The United Nations in an Interdependent World. *International Affairs* (Moscow, January 1989): 11–21.

Superfund Act. 1980. U.S. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Public Law No. 96–510 of 11 December 1980, United States Code 42: 9601.

Suter, Keith. 1991. *Antarctica: Private Property or Public Heritage?* London: Pluto Press.

Szasz, Paul C. 1992. Restructuring the International Organizational Framework. In *Environmental Change and International Law: New Challenges and Dimensions,* edited by Edith Brown Weiss, 340–384. Tokyo: United Nations University Press.

Tarlock, A. Dan. 1997. Exclusive Sovereignty versus Sustainable Development of a Shared Resource: The Dilemma of Latin American Rainforest Management. *Texas International Law Journal* 32: 37–66.

Taylor, Prue. 1998. *An Ecological Approach to International Law: Responding to Challenges of Climate Change.* London: Routledge.

Ten Kate, Kerry, and Lasén Diaz, Carolina. 1997. The Undertaking Revisited: A Commentary on the Revision of the International Undertaking on Plant Genetic Resources for Food and Agriculture. *Review of European Community and International Environmental Law* 6: 284–292.

Tigerstrom, Barbara von. 1997. The Public Trust Doctrine in Canada. *Journal of Environmental Law and Practice* 7: 379–401.

Toynbee, Arnold J. 1961. *A Study of History: Reconsiderations 12.* Oxford: Oxford University Press.

Train, Russell E. 1972. A World Heritage Trust. In *Action for Wilderness,* edited by Elizabeth R. Gillette, 172–176. Washington, DC: Sierra Club.

UNECE. 1998. Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, adopted by the United Nations Economic Commission for Europe (Aarhus, Denmark, 25 June 1998); *International Legal Materials* 38: 517.

UNESCO. 1972. Convention for the Protection of the World Cultural and Natural Heritage, adopted by the United Nations Educational, Scientific and Cultural Organization (Paris, 16 November 1972); *United Nations Treaty Series* 1037: 151.

UNSG. 1997. Report of the Secretary-General to the General Assembly, Renewing the United Nations: A Programme for Reform, UN Doc. A/51/950 (14 July 1997).

UNSG. 1998a. Note by the Secretary-General on United Nations Reform Measures and Proposals, A New Concept of Trusteeship, UN Doc. A/52/849 (31 March 1998).

UNSG. 1998b. Report of the Secretary-General to the General Assembly, Environment and Human Settlements, UN Doc. A/53/463 (6 October 1998).

US Draft Seabed Convention. Draft United Nations Convention on the International Seabed Area: Working Paper submitted by the US delegation to the UN Seabed Committee (23 May 1970), Official Records of the General Assembly, 25th Sess./

Suppl. 21, UN Doc. A/8021, Annex V; reprinted in: UN Division for Ocean Affairs and the Law of the Sea 1996, *The Law of the Sea: Concept of the Common Heritage of Mankind,* Legislative History of Articles 133 to 150 and 311(6) of the United Nations Convention on the Law of the Sea, 150. New York: United Nations.

Van der Lugt, Cornis T. 2000. *State Sovereignty or Ecological Sovereignty: A Study of the Regulation of Acid Rain within the European Union.* Baden-Baden: Nomos.

Van Dyke, Jon M. 1993. International Governance and Stewardship of the High Seas and Its Resources. In *Freedom for the Seas in the 21st Century: Ocean Governance and Environmental Harmony,* edited by Jon M. van Dyke, Durwood Zaelke and Grant Hewison, 13–22. Washington, DC: Island Press, 13–22.

Vibhute, K. I. 1998. Environment, Present and Future Generations: Intergenerational Equity, Justice and Responsibility. *Indian Journal of International Law* 38: 65–73.

WBGU. 2002. Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen (German Advisory Council on Global Change), *Charging the Use of Global Commons.* Berlin: Springer.

Waters, Donovan W. M. 1995. The Institution of the Trust in Civil and Common Law. *Hague Academy of International Law: Recueil des Cours* 252: 113–454.

Waterson, Merlin. 1997. *The National Trust: The First Hundred Years.* Rev. London: National Trust.

Watson, Alan. 1993. *Legal Transplants: An Approach to Comparative Law.* 2nd edition. Edinburgh: Scottish Academic Press.

Weeramantry, Christopher G. 1992. *Nauru: Environmental Damage Under International Trusteeship.* Melbourne: Oxford University Press.

Werner, Wouter G., and Jaap H. de Wilde. 2001. The Endurance of Sovereignty. *European Journal of International Relations* 7: 283–313.

Wiener, Jonathan B. 2001. Something Borrowed for Something Blue: Legal Transplants and the Evolution of Global Environmental Law. *Ecology Law Quarterly* 27: 1295–1371.

Williams, Sharon A. 1978. *The International and National Protection of Movable Cultural Property: A Comparative Study.* New York: Oceana.

Wolfrum, Rüdiger. 1996. The Convention on Biological Diversity: Using State Jurisdiction as a Means of Ensuring Compliance. In *Enforcing Environmental Standards: Economic Mechanisms as Viable Means,* edited by Rüdiger Wolfrum, 373–393. Berlin: Springer.

Young, Michael D., and Bonnie J. McCay. 1995. Building Equity, Stewardship, and Resilience into Market-Based Property Right Systems. In *Property Rights in Social and Ecological Context: Concepts and Case Studies,* edited by Susan Hanna and Mohan Munasinghe, 87–102. Washington, DC: World Bank.

Young, Oran R. 2002. *The Institutional Dimensions of Environmental Change: Fit, Interplay, and Scale.* Cambridge, MA: MIT Press.

Zaelke, Durwood, and James Cameron. 1990. Global Warming and Climate Change: An Overview of the International Legal Process. *American University Journal of International Law and Policy* 5: 249–290.

Zanghi, Claudio. 1999. Per una tutela delle generazioni future. *Ius* 46: 623–638.

Zharen, Wyndylyn M. von. 1998. Ocean Ecosystem Stewardship. *William and Mary Environmental Law and Policy Review* 23: 1–108.