

Global Environmental Institutions

Elizabeth R. DeSombre

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Global warming, the ozone hole, toxic chemicals, endangered species – such topics are now part of our daily news. There has been a concurrent growth in interest in the institutions that deal with global environmental issues. A vast number of international organizations address these matters; this volume provides an overview of the major global institutions attempting to protect the natural environment.

It first considers the United Nations Environment Programme and the other entities within the United Nations that play important roles in global environmental governance. It then examines institutions clustered by issue area, introducing institutions that focus on protecting endangered species and biodiversity, those that govern the ocean environment, those focusing on the atmosphere, and a recent set of institutions that regulate the transboundary movement of hazardous substances. It concludes with current debates on financing international environmental action, gaining widespread participation by states, and the question of whether the institutional structure of global environmental governance can, and should, be fundamentally reformed. The volume as a whole focuses on:

- the underlying causes of global environmental problems;
- the creation of global environmental institutions;
- the effectiveness of action undertaken by these institutions.

Written by an acknowledged expert in the field, *Global Environmental Institutions* is essential reading for students of environmental politics and international organizations.

Elizabeth R. DeSombre is Frost Associate Professor of Environmental Studies and Associate Professor of Political Science at Wellesley College. Her previous books include: *Flagging Standards: Globalization and Environmental, Safety, and Labor Regulations at Sea* (2006), *The Global Environment and World Politics* (2002, second edition 2007), and *Domestic Sources of International Environmental Policy: Industry, Environmentalists, and U.S. Power* (2000), the latter of which won the 2001 Chadwick F. Alger Prize for the best book published in 2000 in the area of international organization and the 2001 Lynton Caldwell Award for the best book published on environmental policy.

Global Institutions Series

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University of Manchester, UK

About the series

The “Global Institutions Series” is edited by Thomas G. Weiss (The CUNY Graduate Center, New York, USA) and Rorden Wilkinson (University of Manchester, UK) and designed to provide readers with comprehensive, accessible, and informative guides to the history, structure, and activities of key international organizations. Every volume stands on its own as a thorough and insightful treatment of a particular topic, but the series as a whole contributes to a coherent and complementary portrait of the phenomenon of global institutions at the dawn of the millennium.

Books are written by recognized experts, conform to a similar structure, and cover a range of themes and debates common to the series. These areas of shared concern include the general purpose and rationale for organizations, developments over time, membership, structure, decision-making procedures, and key functions. Moreover, current debates are placed in historical perspective alongside informed analysis and critique. Each book also contains an annotated bibliography and guide to electronic information as well as any annexes appropriate to the subject matter at hand.

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Series editors' foreword

The current volume is the eighth in a new and dynamic series on “global institutions.” The series strives (and, based on the initial volumes, we believe succeeds) to provide readers with definitive guides to the most visible aspects of what we know as “global governance.” Remarkable as it may seem, there exist relatively few books that offer in-depth treatments of prominent global bodies and processes, much less an entire series of concise and complementary volumes. Those that do exist are either out of date, inaccessible to the non-specialist reader, or seek to develop a specialized understanding of particular aspects of an institution or process rather than offer an overall account of its functioning. Similarly, existing books have often been written in highly technical language or have been crafted “in house” and are notoriously self-serving and narrow.

The advent of electronic media has helped by making information, documents, and resolutions of international organizations more widely available, but it has also complicated matters. The growing reliance on the Internet and other electronic methods of finding information about key international organizations and processes has served, ironically, to limit the educational materials to which most readers have ready access – namely, books. Public relations documents, raw data, and loosely refereed websites do not make for intelligent analysis. Official publications compete with a vast amount of electronically available information, much of which is suspect because of its ideological or self-promoting slant. Paradoxically, the growing range of purportedly independent websites offering analyses of the activities of particular organizations have emerged, but one inadvertent consequence has been to frustrate access to basic, authoritative, critical, and well-researched texts. The market for such has actually been reduced by the ready availability of varying quality electronic materials.

For those of us that teach, research, and practice in the area, this access to information has been at best frustrating. We were delighted, then, when Routledge saw the value of a series that bucks this trend and provides key reference points to the most significant global institutions. They are betting that serious students and professionals will want serious analyses. We have assembled a first-rate line-up of authors to address that market. Our intention, then, is to provide one-stop shopping for all readers – students (both undergraduate and postgraduate), interested negotiators, diplomats, practitioners from non-governmental and intergovernmental organizations, and interested parties alike – seeking information about most prominent institutional aspects of global governance.

Global environmental institutions

When we first sat down to think about the line-up for our series, a book on global environmental institutions was high on our list. The editors of the series, however, struggled to identify precisely what was required. Like many others, we were only too well aware that moves to regulate aspects of human behavior to protect the global environment had all too frequently been piecemeal, the result of purely economic pressures or stumbled upon almost by accident. Moreover, while a good many institutions, agreements, and conventions had appeared to deal specifically (and, in some cases, tangentially) with the global environment, there existed no one central body.¹

Whereas institutions such as the World Bank, the UN Security Council, or World Health Organization, among many others, had almost chosen themselves, we struggled to identify a core institution that would be the focus of a book. Our first thought was a book on the UN Environment Programme (UNEP) or on UN environmental conferences, conventions, and programs. We thought this the easiest and most sensible way to introduce our readers to the topic. We approached Beth DeSombre to write this book for the series. We knew her well as a leading expert on the institutional politics of the global environment, prize-winning author (for her first book, *Domestic Sources of International Environmental Policy*),² and friend. Beth was quick to put us right. A book centered on either UNEP or the various UN-based initiatives would sketch a skewed picture. It would focus only on a narrow range of institutional responses to environmental problems. Instead, we needed to broaden our horizons and consider the full range of institutions involved in governing the global environment.

Here again, however, we hit a problem. We knew only too well that the congested institutional terrain of global environmental governance was such that a book attempting to cover the area in its entirety would be either too long or too brief to be satisfactory. An answer was, nevertheless, at hand. Beth suggested that she focus on global environmental institutions in a more thematic way, drawing attention not only to the UN's environmental machinery but also to those aspects of regulation within and beyond the UN that deal with species and conservation, oceans, the atmosphere, the transboundary movement of hazards, and future directions.

We have come to trust our authors; Beth proved to be no different. We were delighted when she accepted our offer of contributing this book to the series; and we are proud of the result. She has produced a volume that charts a path through the congested terrain of global environmental governance in a clear, concise and measured fashion. It is a first-rate book: informative, knowledgeable, and considered. We know those that have come to expect the highest standards from our books will not be disappointed. *Global Environmental Institutions* deserves to become the standard introduction to global environmental governance. We are pleased to recommend it to all. As always, comments and suggestions from readers are welcome.

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Rorden Wilkinson,
University of Manchester, UK
April 2006

Notes

- 1 See Lorraine Elliott, "Global Environmental Governance," in Rorden Wilkinson and Steve Hughes, eds., *Global Governance: Critical Perspectives* (London: Routledge, 2002), 57–58.
- 2 See Elizabeth R. DeSombre, *Domestic Sources of International Environmental Policy: Industry, Environmentalists and US Power* (Cambridge, Mass.: MIT Press, 2000). The book was awarded the 2001 Chadwick F. Alger prices for the best book published in the area of international organization and the 2001 Lynton Caldwell award for the best book published on environmental policy.

Acknowledgments

The field of global environmental politics has become a real community of scholars willing to provide guidance and feedback on each other's work. Two loci of this community are the Environmental Studies Section of the International Studies Association and the Teaching Global Environmental Politics (gep-ed) listserve, run by Mike Maniates, both of which help to create and maintain a cooperative environment that makes me optimistic about my profession and about our ability to have an impact on the global environment.

Within this community a number of scholars have been gracious enough to provide feedback and suggestions on one or more chapters in this volume: Henrik Selin, Peter Haas, Wil Burns, Chris Joyner, M.J. Peterson, Pam Chasek, Michele Betsill, Ted Parson, Tammi Gutner and Barbara Connolly. Others – Geoffrey Wandesforde-Smith, Kate O'Neill, Miranda Schreurs, and Ken Wilkening – helped me track down obscure bits of information. I appreciate the help from all of them. Wellesley College students Katie Clifford and Hana Freymiller assisted with some of the research for this volume. I also benefited from the research and discussion of the Wellesley students in my International Environmental Law course over the last several years, who have helped me hone my understandings of global environmental institutions.

I appreciate the excellent support I received from the University of Florida Department of Political Science while writing this book during my sabbatical sojourn in Gainesville, and am grateful to Leann Brown, who graciously let me use her UF office while she was on sabbatical.

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Finally, the greatest thanks go to Sammy Barkin, who reads everything I write. There is no greater joy than to share your life with someone who shares your passions, both academic and otherwise, and can seamlessly integrate them day-to-day.

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List of abbreviations

ACFR	Advisory Committee on Fishery Research
AIA	advanced informed agreement
AQA	Agreement between the Government of Canada and the Government of the United States of America on Air Quality
CBD	Convention on Biological Diversity
CCAMLR	Convention (or Commission) for the Conservation of Antarctic Marine Living Resources
CCD	Convention to Combat Desertification
CCOL	Coordinating Committee on the Ozone Layer
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CDM	Clean Development Mechanism
CFCs	chlorofluorocarbons
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species
COLREG	Convention on the International Regulations for Preventing Collisions at Sea
COP	Conference of the Parties
CPRs	common pool resources
CSD	Commission on Sustainable Development
DDT	dichlorodiphenyltrichloroethane
DEWA	Division of Early Warning and Assessment (of UNEP)
DGD	Decision Guidance Document
DNAs	Designated National Authorities
EANET	East Asian Acid Deposition Monitoring Network
ECOSOC	Economic and Social Council
EEZ	Exclusive Economic Zone

EMEP	Cooperative Program for Monitoring and Evaluation of Long-Range Transmission of Air Pollutants in Europe
ExCom	Executive Committee
FAO	Food and Agriculture Organization
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System
GEO	Global Environmental Outlook (Yearbook)
GFCM	General Fisheries Commission for the Mediterranean
GHG	greenhouse gas
GMOs	genetically modified organisms
GNP	gross national product
GPS	global positioning system
GRID	Global Resource Information Database
HBFCs	hydrobromofluorocarbons
HCFCs	hydrochlorofluorocarbons
IATTC	Inter-American Tropical Tuna Commission
IBSFC	International Baltic Sea Fisheries Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
ICPD	International Conference on Population and Development
ICP	International Cooperative Program
IFCS	Intergovernmental Forum on Chemical Safety
IIASA	International Institute for Applied Systems Analysis
IISD	International Institute for Sustainable Development
IJC	International Joint Commission
ILO	International Labour Organization
IMO	International Maritime Organization
INC	Intergovernmental Negotiating Committee
INFOTERRA	International Referral System of UNEP
IOMC	Inter-Organization Program on the Sound Management of Chemicals
IOTC	Indian Ocean Tuna Commission
IPCC	Intergovernmental Panel on Climate Change
IPEN	International POPs Elimination Network
IRPTC	International Register of Potentially Toxic Chemicals
ISA	International Seabed Authority
ISM Code	International Safety Management Code
ISPS Code	International Ship and Port Facility Security Code
ITLOS	International Tribunal for the Law of the Sea

IUCN	World Conservation Union (formerly International Union for the Conservation of Nature and Natural Resources)
IWC	International Whaling Commission
LMOs	living modified organisms
LRTAP	Long-Range Transboundary Air Pollution (Convention)
LULUCF	land use, land-use change, and forestry
MAP	Mediterranean Action Plan
MARPOL	International Convention for the Prevention of Pollution from Ships
MeBr	methyl bromide
MEPC	Maritime Environment Protection Committee
MOP	Meeting of the Parties
MoU	memorandum of understanding
MSC	Maritime Safety Committee
NAFO	Northwest Atlantic Fisheries Organization
NASA	National Aeronautics and Space Administration
NASCO	North Atlantic Salmon Conservation Organization
NEAFC	Northeast Atlantic Fisheries Commission
NGOs	non-governmental organizations
NOx	nitrogen oxides
NPACF	North Pacific Anadromous Fish Commission
OAU	Organization of African Unity (now African Union)
ODP	ozone-depletion potential
ODS	ozone-depleting substance
OECD	Organization for Economic Cooperation and Development
OEWG	Open-Ended Working Group
PCBs	polychlorinated biphenyls
PIC	prior informed consent
PICES	North Pacific Marine Science Organization
POPs	persistent organic pollutants
RFMO	regional fishery management organization
ROPME	Regional Organization for the Protection of the Marine Environment (the Kuwait Region)
SAICM	Strategic Approach to International Chemicals Management
SBSTTA	Subsidiary Body on Scientific, Technical, and Technological Advice (of the CBD)
SOLAS	Convention for the Safety of Life at Sea
STCW	International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers

SSC	Species Survival Commission (of IUCN)
TCC	Technical Cooperation Committee (of IMO)
TEAP	Technology and Economic Assessment Panel
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNCHE	United Nations Conference on the Human Environment
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
VOCs	volatile organic compounds
WCED	World Commission on Environment and Development
WCMC	World Conservation Monitoring Centre
WCPFC	West and Central Pacific Fisheries Commission
WCS	World Conservation Strategy
WHC	World Heritage Convention (Convention Concerning the Protection of the World Cultural and Natural Heritage)
WHO	World Health Organization
WMO	World Meteorological Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
WWF	World Wide Fund for Nature

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1 Introducing global environmental institutions

The global environment is threatened. As the Millennium Ecosystem Assessment in 2005 pointed out, “nearly two thirds of the services provided by nature to humankind are found to be in decline worldwide.”¹ Species are becoming extinct at levels not experienced except during major global catastrophes. Most major commercial fisheries are depleted, and ocean ecosystems disrupted. The problem of acid rain is spreading to newly industrializing areas, and the seasonal thinning in the Antarctic ozone layer has not yet abated. Generation of toxic waste is increasing worldwide. The environmental impact of a range of chemicals is becoming better understood at the same time it is discovered how environmentally mobile and pervasive they can be. Global climate change threatens to intensify many existing environmental problems and cause new ones, with rising sea levels and changing patterns of temperature and precipitation that will affect ecosystems worldwide.

Many of the efforts to address these problems have taken place within international institutions, the focus of this book. An examination of institutions that govern the protection of the global environment is a daunting task. Unlike some issues, such as international trade, in which one large centralized organization provides most of the governance internationally, there is no centralized governance on international environmental issues. The United Nations (UN) plays an important role; the United Nations Environment Programme (UNEP) has facilitated the negotiation of many international environmental agreements, acts as the secretariat for some, and plays a role in coordinating international scientific research. But even the organizations UNEP oversees have their own internal governing processes, and there are numerous institutions without UNEP involvement.

The number of international institutions addressing global environmental issues is large and rapidly growing. One study identified 125

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distinct international environmental regimes (most of them creating organizations) existing in 1992, and others have estimated that an additional five have been created annually since then.² This volume focuses on a subset of these institutions. It first considers UNEP and the other institutional entities within the United Nations that play important roles in global environmental governance. It then examines institutions clustered by issue area, roughly in the order that the central institutions addressing these issues were created. These chapters introduce institutions that focus on protecting endangered species and biodiversity, those that govern the ocean environment, those focusing on the atmosphere, and a recent set of institutions that focus on the transboundary movement of hazardous substances. The volume concludes with a discussion of the Global Environment Facility, an institution that provides funding to address international environmental problems, as well as some current debates: how to gain widespread participation, especially by the United States, in global environmental institutions, and whether the institutional structure of global environmental governance can, and should, be fundamentally reformed. In a world with so many institutions providing governance on environmental issues there is inevitably overlap, duplication of effort, and even the possibility of institutions working at cross-purposes. Reform of such a complex system is difficult, however.

The number and variety of existing global environmental institutions also makes impossible a consideration of all of them in one volume. The ones examined here are those deemed particularly important and also those that fit into thematically organized chapters. There are some important emerging issues, such as forest management and desertification, that have nascent institutional structures that are not discussed here, despite their increasing prominence.

A word should also be said about what is considered an "institution." Though there are some free-standing organizations, such as UNEP or the International Maritime Organization, that focus on multiple issues, most of the issue-specific entities discussed in this volume are based on a specific international agreement. The agreements designate secretariats, and have headquarters and voting procedures for making decisions within their area of competence. The focus here is also on multilateral institutions. By that broad definition there are hundreds of global environmental institutions in existence. In choosing ones to examine here, priority was given to those institutions that are empowered with independent decision making ability. Fisheries commissions set annual quotas and policies for the fisheries they oversee. The Conference of the Parties for the Convention on Migratory Species

decides which species will be listed for protection. The Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer can adjust the control measures parties have to follow. Weaker institutions such as the Convention on Wetlands of International Importance Especially as Waterfowl Habitat have no provision for changing the obligations of the parties. The independence of the stronger institutions should not be overstated: most regional fishery management organizations have a process by which states may opt out of commission rules they do not wish to follow, and states may always choose not to ratify an amendment or may even withdraw from an agreement altogether. But it is this ability to act to govern the issue areas on which they focus that makes these institutions especially important.

Examining institutions, the focus of the series in which this book appears, of necessity leaves out some important action on international environmental issues. Perhaps more than in other international issue areas, much of what happens of relevance to environmental protection happens alongside, and sometimes completely apart from, institutions. Action undertaken by non-governmental organizations, national or multinational industry actors, and national or sub-national governments has a dramatic effect on the issues examined in this volume. In some cases this extra-institutional activity helps motivate the creation of institutions or influences action within existing institutions. And in some cases, such as the innovative non-state action currently undertaken on climate change,³ this activity occurs because international institutions appear unlikely to succeed in addressing the problem. Those interested in global environmental politics would be wise to pay attention to these types of actors and the broader issue of global environmental governance, which is of necessity slighted in a book devoted to explaining global environmental institutions.

These institutions do, however, play a major role in addressing environmental issues on the global level. International cooperation is both necessary and difficult for mitigating environmental problems, and the institutions described in this volume work to address the specific types of difficulties faced in international environmental cooperation.

On the one hand, cooperation to address some environmental issues has structural advantages. Most environmental resources regenerate, so in many cases successfully managing the environment can benefit everyone involved. If fishers can cooperate in limiting the number of fish they catch to a sustainable level, they can continue to fish indefinitely. Pollutants put into ecosystems are eventually removed or made inaccessible by natural processes, so eliminating the source of damage can

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often improve an environmental amenity. Moreover, environmental harms often are externalities of other activities: almost no one sets out to destroy the environment. But a set of incentive structures, some inherent and others the result of political and economic processes, can result in environmental degradation if international action is not taken.

The fact that environmental damage is not intentionally created ironically provides some of the difficulties in preventing it. Because there is often no direct economic cost to harming the environment (at least to the actors undertaking the harm), changing behavior to avoid doing so may be costly. Those whose behavior would have to change are likely to resist action, and important economic actors whose behavior damages the environment tend to have a disproportionate influence politically.⁴ States, as sovereign entities under international law, do not have to accept international agreements or join international institutions they do not wish to participate in. But environmental damage is often experienced internationally regardless of the location of the activity that causes it, so many problems require widespread participation to be addressed successfully. Moreover, even when states know they benefit from cooperative action to protect the environment, they may prefer to let others undertake costly action, and gain from the environmental benefits generated by others without having to bear the costs themselves. If enough states take this approach, international cooperation will fail.

These difficulties are augmented by two additional problems that face efforts to sustain cooperation on environmental issues: time horizons and uncertainty. Environmental protection works to ensure long-run benefits for those who sacrifice in the short run. For a hunter, for example, the cost of ensuring a perpetual ability to harvest seals (or bears or antelope) may be to take fewer of them this year than that hunter would have otherwise chosen to do. But this tradeoff is only worthwhile if the species is successfully protected and the hunter is able to continue to hunt in the reasonable future. If other actors do not successfully restrict their behavior (either because they have not agreed to do so or because they do not live up to their agreements), the hunter has given up access to resources for no eventual gain. Actors are not likely to restrict their behavior unless they can be reasonably certain they will gain in the long run from their sacrifice.

An essential role of international institutions is to increase the likelihood that states will live up to their commitments to protect the environment. An institution can do so by increasing transparency; in other words, by making it easier for others to know when actors are, or

are not, living up to their obligations. Reporting requirements, for example, make it easier to determine when states are not doing what they have agreed to do. Increasingly intrusive types of monitoring (such as mandating observers on fishing vessels) have recently been created within existing institutions to overcome the potential unreliability of self-reporting. The European agreements on acid rain include a monitoring process that is able to evaluate the accuracy of emissions data reported by states. Institutions can also increase the likelihood of implementation by establishing penalties for those who do not follow the rules set by the institution. Though strong enforcement mechanisms are rarely found in international environmental institutions, the Convention on International Trade in Endangered Species of Wild Fauna and Flora has called for the cessation of all species trade with some states with poor records at upholding the requirements of the agreement.⁵

Similarly, if the information underlying the cooperative effort – how many members of a given species exist, how (and how quickly) restrictions on hunting or harvesting will impact the regeneration of the species, what other factors are implicated in the decline of the species – is uncertain, even restricting harvesting may not have the promised payoff. So even in protecting renewable resources, which from the perspective of incentive structures is easier to address than many other global environmental problems, the uncertainty increases the difficulty of doing so. For pollution issues uncertainty may cause even greater problems: it may not be clear what the cause of a polluted ecosystem is, and since those actors causing pollution will frequently not directly benefit from preventing it, they will resist action as long as the cause can be questioned. For problems like ozone depletion or climate change, where the long residence time of the chemicals deemed to cause environmental damage requires that action be taken long before effects are clearly manifest, uncertainty is magnified and cooperative action more difficult.

International institutions can work to decrease uncertainty. Most environmental agreements begin by creating scientific assessment bodies as a part of the institutional structure of the agreement. These scientific committees study the resource in question, determining the level and cause of environmental harm. Associated requirements that states examine and report on their own behavior and environmental conditions generate further information to use in evaluating a given problem. The recent trend towards creating general framework conventions without substantive obligations for states reflects situations in which policymakers argue that there is insufficient evidence of

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environmental damage or its human causes to justify costly action. In many issues, such as ozone depletion and acid rain, the scientific processes in these institutions informed states that environmental damage was more extensive than they realized and states were willing to change their behavior once they realized the severity of the environmental problems.

International environmental institutions vary in their effectiveness at addressing the problems on which they focus. The following chapters describe the creation and operation of the major global environmental institutions, discussing their decision making processes, their interactions with other institutions, and the effects they have had. The multiplicity of existing environmental institutions provides the opportunity to consider them comparatively, and increases the likelihood that new institutions created can take account of the lessons learned from the operations of existing ones. This volume attempts to provide information for those who wish to do so.

Notes

- 1 Millennium Ecosystem Assessment, *Living Beyond Our Means: Natural Assets and Human Well-Being*, Statement from the Board, available at <http://www.millenniumassessment.org/en/products.aspx>, 5.
- 2 Sebastian Oberthür and Thomas Gehring, "Reforming International Environmental Governance: An Institutional Perspective on Proposals for a WEO," in Frank Biermann and Steffen Bauer, eds., *A World Environment Organization* (Aldershot: Ashgate, 2005), 206.
- 3 See, for example, Harriet Bulkeley and Michele Betsill, *Cities and Climate Change: Urban Sustainability and Global Environmental Governance* (London and New York: Routledge, 2003).
- 4 David Vogel, "Representing Diffuse Interests in Environmental Policymaking," in R. Kent Weaver and Bert A. Rockman, eds., *Do Institutions Matter? Government Capabilities in the United States and Abroad* (Washington, D.C.: The Brookings Institution, 1993), 237–71.
- 5 Peter H. Sand, "Whither CITES? The Evolution of a Treaty Regime in the Borderland of Trade and Environment," *European Journal of International Law* 8(1) (1997), 29–58.

Bibliography

Books

- Regina S. Axelrod, David Leonard Downie, and Norman J. Vig, eds., *The Global Environment: Institutions, Law and Policy* (Washington, D.C.: CQ Press, 2005). This edited volume has individual chapters on many of the institutions discussed here, as well as chapters that cover broader aspects of global environmental governance.
- J. Samuel Barkin and George E. Shambaugh, eds., *Anarchy and the Environment: The International Relations of Common Pool Resources* (Albany: SUNY Press, 1999). This volume lays out the theoretical implications of the issue structure of environmental problems, evaluating the arguments with cases from among the most prominent international environmental institutions.
- Frank Biermann and Steffen Bauer, eds., *A World Environment Organization* (Aldershot, UK: Ashgate, 2005). A collection of the major scholarly arguments for and against a central institution to govern the global environment.
- Edith Brown Weiss and Harold K. Jacobson, eds., *Engaging Countries: Strengthening Compliance with International Environmental Accords* (Cambridge, Mass.: MIT Press, 1998). This study examines five international agreements – CITES, the London (Dumping) Convention, the Montreal Protocol, the World Heritage Convention, and the International Tropical Timber Agreement – and looks at their implementation by a representative set of states and organizations worldwide: the United States, the European Union, Japan, the Soviet Union, Hungary and its successor states, China, India, Cameroon, and Brazil.
- W. Bradnee Chambers and Jessica F. Green, eds., *Reforming International Environmental Governance: From Institutional Limits to Innovative Reforms* (Tokyo: United Nations University Press, 2005). Chapters by individual authors assess different ways – such as strengthening UNEP, clustering multilateral environmental agreements, creating a World Environment Organization, and others – to address the difficulties caused by the multiplicity of global environmental institutions.
- Pamela S. Chasek, *Earth Negotiations: Analyzing Thirty Years of Environmental Diplomacy* (Tokyo, New York, and Paris: United Nations University Press, 2001). This volume considers the negotiations of the major environmental

- agreements negotiated between 1972 and 1992, as well as the context before and after this period.
- Pamela S. Chasek, David L. Downie, and Janet Welsh Brown, *Global Environmental Politics*, 4th edn. (Boulder: Westview Press, 2006). This concise overview of the evolution of the international politics of the environment includes 11 case studies of environmental issues and the institutions negotiated to manage them.
- Jennifer Clapp, *Toxic Exports: The Transfer of Hazardous Wastes from Rich to Poor Countries* (Ithaca: Cornell University Press, 2001). Discusses the creation and evolution of the Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal.
- Michael Grubb, Matthias Koch, Abby Munson, Francis Sullivan, and Koy Thomson, *The Earth Summit Agreements: A Guide and Assessment* (London: Earthscan, 1993). The definitive overview of the agreements that came out of the 1992 United Nations Conference on Environment and Development.
- Peter M. Haas, Robert O. Keohane, and Marc A. Levy, eds., *Institutions for the Earth* (Cambridge, Mass.: MIT Press, 1993). An early work considered essential in giving an overview of the negotiation of global institutions addressing ozone depletion, acid rain, pollution of regional seas, ocean pollution, fisheries management, and other emerging issues.
- Robert O. Keohane and Marc A. Levy, eds., *Institutions for Environmental Aid* (Cambridge, Mass.: MIT Press, 1996). Coverage of efforts to provide funding to address international environmental issues. Includes important discussion of the GEF and the Montreal Protocol Multilateral Fund.
- Millennium Ecosystem Assessment, *Ecosystems and Human Well-Being*, vols. 1–5 (Washington, D.C.: Island Press, 2005). This comprehensive assessment undertaken by more than 1300 scientists from nearly 100 states evaluates human impacts on the global (and local) environment.
- Marian A. L. Miller, *The Third World in Global Environmental Politics* (Boulder: Lynne Rienner Publishers, 1995). An early overview of the role of developing states in creating global environmental institutions, with a focus on ozone-layer protection, biodiversity conservation, and hazardous waste trade.
- Edward A. Parson, *Protecting the Ozone Layer: Science and Strategy* (Oxford: Oxford University Press, 2003). The essential source for everything relating to international efforts to protect the ozone layer.
- Clyde Sanger, *Ordering the Oceans: The Making of the Law of the Sea* (London: Zed Books, 1986). An overview of the negotiations and results of the United Nations Convention on the Law of the Sea.
- The Social Learning Group, *Learning to Manage Global Environmental Risks*, vols. 1 and 2 (Cambridge, Mass.: MIT Press, 2001). An examination of the process of creating domestic and international action to address acid rain, ozone depletion, and climate change that traces the action from initial scientific studies and domestic responses across a variety of countries.
- Mostafa K. Tolba, with Iwona Rummel-Bulska, *Global Environmental Diplomacy: Negotiating Environmental Agreements for the World, 1973–1992* (Cambridge, Mass.: MIT Press, 1998). Tolba, the executive director of UNEP between 1976 and 1992, discusses the environmental issues negotiated during his time at UNEP.

David G. Victor, Kal Raustiala, and Eugene B. Skolnikoff, eds., *The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice* (Cambridge, Mass.: MIT Press, 1998). This volume examines the processes by which global environmental institutions succeed (or fail) in holding states to their commitments and lead to environmental improvement.

World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987). This report by the commission headed by Gro Harlem Brundtland assesses the relationship between environment and development, makes recommendations for improving the condition of both, and was influential in leading to the 1992 United Nations Convention on Environment and Development and other forms of global environmental governance.

Websites

IISD, *Linkages: A Multimedia Resource for Environment and Development Policy Makers*, available at <http://www.iisd.ca/>. An indispensable resource for reports on negotiations of ongoing meetings of international environmental agreements and the institutions they create; home of the *Earth Negotiations Bulletin*.

United Nations environmental machinery

United Nations Environment Programme (UNEP), <http://www.unep.org>.

UNEP Regional Seas Programme, <http://www.unep.org/regionalseas/>.

Commission on Sustainable Development, <http://www.un.org/esa/sustdev/csd/csd.htm>.

Millennium Development Goals, <http://www.un.org/millenniumgoals/index.html>.

Species and biodiversity institutions

CITES Secretariat, <http://www.cites.org/>.

Convention on Migratory Species Secretariat, <http://www.cms.int/>.

Ramsar (Wetlands) Secretariat, <http://www.ramsar.org/>.

World Heritage Convention Secretariat, <http://whc.unesco.org/>.

Secretariat for the Convention on Biological Diversity, <http://www.biodiv.org/>.

The World Conservation Union (IUCN), <http://www.iucn.org/>.

World Conservation Monitoring Centre, <http://www.unep-wcmc.org/>.

International ocean institutions

International Maritime Organization, <http://www.imo.org>.

United Nations Convention on the Law of the Sea, <http://www.admiralty-lawguide.com/conven/unclostable.html>.

International Seabed Authority, <http://www.isa.org.jm/>.

International Tribunal for the Law of the Sea, <http://www.itlos.org/>.

UN Food and Agriculture Organization's information page on regional fishery bodies, <http://www.fao.org/fi/body/rfb/index.htm>.

Fisheries commissions

IATTC, <http://www.iattc.org/>.

ICCAT, <http://www.iccat.es/>.

IOTC, <http://www.iotc.org>.

CCSBT, <http://www.ccsbt.org/>.

NASCO, <http://www.nasco.int/>.

NPAFC, <http://www.npafc.org/>.

NEAFC, <http://www.neafc.org/>.

GFCM, http://www.fao.org/fi/body/rfb/GFCM/gfcm_home.htm.

WCPFC, <http://www.wcpfc.org>.

IBSFC, <http://www.ibsfc.org/>.

NAFO, <http://www.nafo.ca/>.

CCAMLR, <http://www.ccamlr.org/>.

IWC, <http://www.iwcoffice.org/>.

Atmospheric commons institutions

LRTAP Secretariat, <http://www.unece.org/env/lrtap/welcome.html>.

Ozone Secretariat, <http://hq.unep.org/ozone/>.

Multilateral Fund Secretariat, <http://www.multilateralfund.org/>.

UN Framework Convention on Climate Change Secretariat, <http://unfccc.int/>.

Intergovernmental Panel on Climate Change, <http://www.ipcc.ch/>.

Institutions addressing transboundary movement of hazards

Basel Convention Secretariat, <http://www.basel.int/>.

Rotterdam Convention Secretariat, <http://www.pic.int/>.

Stockholm Convention Secretariat, <http://www.pops.int/>.

Additional institutions

Global Environment Facility, <http://www.gefweb.org/>.