

INTERNATIONAL
ENVIRONMENTAL LAW:
CASES, MATERIALS, AND
PROBLEMS
Second Edition

LexisNexis Law School Publishing Advisory Board

Paul Caron

Professor of Law

Pepperdine University School of Law

Herzog Summer Visiting Professor in Taxation

University of San Diego School of Law

Bridgette Carr

Clinical Professor of Law

University of Michigan Law School

Olympia Duhart

Professor of Law and Director of Lawyering Skills & Values Program

Nova Southeastern University, Shepard Broad Law School

Samuel Estreicher

Dwight D. Opperman Professor of Law

Director, Center for Labor and Employment Law

NYU School of Law

Steven I. Friedland

Professor of Law and Senior Scholar

Elon University School of Law

Carole Goldberg

Jonathan D. Varat Distinguished Professor of Law

UCLA School of Law

Oliver Goodenough

Professor of Law

Vermont Law School

Paul Marcus

Haynes Professor of Law

William and Mary Law School

John Sprankling

Distinguished Professor of Law

McGeorge School of Law

INTERNATIONAL ENVIRONMENTAL LAW: CASES, MATERIALS, AND PROBLEMS

Second Edition

Thomas J. Schoenbaum

Harold S. Shefelman Distinguished Professor of Law, University of Washington

Michael K. Young

President and Professor of Law, University of Washington



ISBN: 978-1-4224-7029-9
Looseleaf ISBN: 978-1-4224-8150-9
eBook ISBN: 978-0-3271-7827-9

Library of Congress Cataloging-in-Publication Data

Schoenbaum, Thomas J., author.
International environmental law : cases, materials, and problems / Thomas J. Schoenbaum, Harold S. Sheffelman
Distinguished Professor of Law, University of Washington, Michael K. Young, President and Professor of Law,
University of Washington. -- Second edition.
p. cm.
ISBN 978-1-4224-7029-9 (hardbound)
1. Environmental law, International--Cases. I. Young, Michael K., 1949- author. II. Title.
K3585.S365 2014
344.04'6--dc23

2014035063

This publication is designed to provide authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional services. If legal advice or other expert assistance is required, the services of a competent professional should be sought.

LexisNexis and the Knowledge Burst logo are registered trademarks of Reed Elsevier Properties Inc., used under license. Matthew Bender and the Matthew Bender Flame Design are registered trademarks of Matthew Bender Properties Inc.

Copyright © 2014 Matthew Bender & Company, Inc., a member of LexisNexis. All Rights Reserved.

No copyright is claimed by LexisNexis or Matthew Bender & Company, Inc., in the text of statutes, regulations, and excerpts from court opinions quoted within this work. Permission to copy material may be licensed for a fee from the Copyright Clearance Center, 222 Rosewood Drive, Danvers, Mass. 01923, telephone (978) 750-8400.

NOTE TO USERS

To ensure that you are using the latest materials available in this area, please be sure to periodically check the LexisNexis Law School web site for downloadable updates and supplements at www.lexisnexis.com/lawschool.

Editorial Offices
121 Chanlon Rd., New Providence, NJ 07974 (908) 464-6800
201 Mission St., San Francisco, CA 94105-1831 (415) 908-3200
www.lexisnexis.com

MATTHEW  BENDER

Preface to Second Edition

We take pleasure to offer this Casebook on International Environmental Law as a classroom learning tool that can be covered in the confines of a three-hour course on the subject. We have assembled these materials with the idea that the book should not be a scholarly work that is encyclopedic in scope but rather should be as practical and compact as possible. To this end, we put a premium on brevity and have included only basic primary materials and notes in the book. We think it is very important for the students to be familiar with more extensive primary materials as well so we are publishing a **Document Supplement** as a separate volume. The documents in the **Document Supplement** are keyed to each of the 10 chapters in the Casebook so the student can read and refer to the documents necessary to understand each topic as he or she is covering the substantive book chapter.

We have carefully ordered the Chapters in the Casebook so the student will acquire the background necessary to understand each subsequent topic in turn. We also presume the student will have no background in either Public International Law or Environmental Law; thus, we include some materials on these topics as well. Of course, it would help understanding if the student has some background in one or both of those two important subjects.

We believe the problem method is a good teaching technique, so we include problems in each Chapter that are designed to stimulate class discussion and understanding. But the professor of course may want to skip some (or all) of the problems or substitute his or her own problems for ours. Thus we offer the problems as optional tools to be covered or not as the professor who is in charge of the course decides is appropriate.

This work is obviously designed as a teaching tool. We have accordingly largely excluded secondary materials from the published work. Of course there are many important and stimulating secondary works that we hope the students consult during the course of studying the subject. To this end at the beginning of the book we provide Suggestions for Further Reading which cite both general works on International Environmental Law and works that are keyed to each of the 10 Chapters of the book.

Although this work is dubbed “second edition,” it is in reality a wholly new start, differing greatly from the first edition. Although three of the co-authors of the first edition, Don Anton, Jon Charney, and Philippe Sands, for various reasons could not participate in doing this edition, the authors are grateful for their ideas and valuable prior contributions, and wish to express our deep thanks and admiration for their work in this field.

We always appreciate hearing from and having suggestions from colleagues.

Thomas J. Schoenbaum, email: tjschoen@uw.edu

Michael K. Young, email: president@uw.edu

Seattle, Washington

November 18, 2013

*Suggestions for Further Reading in International Environmental Law**

Although International Environmental Law is a relatively new field, many outstanding books and articles have appeared on every subject of the field. The scholarship in this area is outstanding but voluminous. In this memorandum, we are confined for practical reasons to listing selected books and articles that we think will be helpful to students seeking additional sources of information.

General Works

To begin with, we think highly of many of the books that cover the entire field of International Environmental Law. We recommend especially the following:

- Birnie, Patricia, Alan Boyle, and Catherine Redgwell, *International Law and the Environment*, 3d ed. (Oxford: Oxford Univ. Press, 2009).
- Bodansky, Daniel, Jutta Brunee, and Ellen Hey, eds., *The Oxford Handbook of International Environmental Law* (Oxford: Oxford Univ. Press, 2007).
- Kiss, Alexander and Dinah Shelton, *International Environmental Law* (Leiden and Boston: Martinus Nijhoff, 2007).
- Sands, Philippe and Jacqueline Peel, *Principles of International Environmental Law*, 3d ed. (New York: Cambridge Univ. Press, 2012).

Chapter 1: Introduction and Background

- Adams, Todd B., *Is There a Legal Future for Sustainable Development in Global Warming? Justice, Economics, and Protecting the Environment*, 16 GEO. INT'L ENVTL. L. REV. 77 (2003).
- Adelman, David E., *The Art of the Unsolvable: Locating the Vital Center of Science for Environmental Law & Policy*, 37 ENVTL. L. 925 (2007).
- Benedickson, Jaime, et al., eds., *Environmental Law and Sustainability After Rio* (Northampton, MA: Edward Elgar Publishing, Inc., 2011).
- Beyerlin, Ulrich and Thilo Marauhn, *International Environmental Law* (Portland, OR: Hart Publishing, 2011).
- Blodgett, Mark S., Richard J. Hunter, Jr., and Hector R. Lozada, *A Primer on International Environmental Law: Sustainability as a Principle of International Law and Custom*, 15 ILSA J. INT'L & COMP. L. 15 (2008).
- Bratspies, Rebecca M., *Rethinking Decisionmaking in International Environmental Law: A Process-Oriented Inquiry into Sustainable Development*, 32 YALE J. INT'L L. 363 (2007).
- Dernbach, John C., *Creating the Law of Environmentally Sustainable Economic Development*, 28 PACE ENVTL. L. REV. 614 (2011).
- Dernbach, John C., *Targets, Timetables, and Effective Implementing Mechanisms: Necessary Building Blocks for Sustainable Development*, 27 WM. & MARY ENVTL. L. & POL'Y REV. 79 (2002).

* The authors would like to thank Jessica L. Montgomery and Craig Henson, JD, 2013, for their research help preparing these materials.

Suggestions for Further Reading

- Desai, Bharat H., *Institutionalizing International Environmental Law* (Ardsley, NY: Transnational Publishers, Inc., 2004).
- Drumbl, Mark A., *Poverty, Wealth, and Obligation in International Environmental Law*, 76 TUL. L. REV. 843 (2002).
- Esty, Daniel C., *Breaking the Environmental Law Logjam: The International Dimension*, 17 N.Y.U. ENVTL. L.J. 836 (2008).
- Kotzé, Louis J., *Global Environmental Governance: Law and Regulation for the 21st Century*. Northampton (MA: Edward Elgar Publishing, Inc., 2012).
- Marong, Alhaji B.M., *From Rio to Johannesburg: Reflections on the Role of International Legal Norms in Sustainable Development*, 16 GEO. INT'L ENV'T L. L. REV. 21 (2003).
- Ørebech, Peter, et al., *The Role of Customary Law in Sustainable Development* (New York: Cambridge Univ. Press, 2005).
- Rao, P.K., *International Environmental Law and Economics* (Malden, MA: Blackwell Publishers Inc., 2002).
- Stark, Barbara, *Sustainable Development and Postmodern International Law: Greener Globalization?*, 27 WM. & MARY ENVTL. L. & POL'Y REV. 137 (2002).
- Yang, Tseming and Robert V. Percival, *The Emergence of Global Environmental Law*, 36 ECOLOGY L.Q. 615 (2009).

Chapter 2: General International Environmental Law

- Abate, Randall S., *Dawn of a New Era in the Extraterritorial Application of U.S. Environmental Statutes: A Proposal for an Integrated Judicial Standard Based on the Continuum of Context*, 31 COLUM. J. ENVTL. L. 87 (2006).
- Applegate, John S., *The Taming of the Precautionary Principle*, 27 WM. & MARY ENVTL. L. & POL'Y REV. 13 (2002).
- Bodansky, Daniel, *Is There an International Environmental Constitution?*, 16 IND. J. GLOBAL LEGAL STUD. 565 (2009).
- Bruch, Carl, *Is International Environmental Law Really Law?: An Analysis of Application in Domestic Courts*, 23 PACE ENVTL. L. REV. 423 (2006).
- Churchill, Robert R. and Geir Ulfstein, *Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A Little-Noticed Phenomenon in International Law*, 94 AM. JUR. INT'L L. 623 (2000).
- Driesen, David M., *Thirty Years of International Environmental Law: A Retrospective and Plea for Reinvigoration*, 30 SYRACUSE J. INT'L L. & COM. 353 (2003).
- Dycus, Stephen, *Nuclear War: Still the Greatest Threat to the Environment*, 25 VT. L. REV. 753 (2001).
- Ehrmann, Markus, *Procedures of Compliance Control in International Environmental Treaties*, 13 COLO. J. INT'L ENVTL. L. & POL'Y 377 (2002).
- Farber, Daniel A., *Probabilities Behaving Badly: Complexity Theory and Environmental Uncertainty*, 37 U.C. DAVIS L. REV. 145 (2003).
- Fitzmaurice, Malgosia, *Contemporary Issues in International Environmental Law* (Northampton, MA: Edward Elgar Publishing, Inc., 2009).
- Foster, Caroline E., *Science and the Precautionary Principle in International Courts and Tribunals: Expert Evidence, Burden of Proof and Finality* (New York: Cambridge Univ. Press, 2011).

Suggestions for Further Reading

- Gray, Kevin R., *International Environmental Impact Assessment: Potential for a Multilateral Environmental Agreement*, 11 COLO. J. INT'L ENV'T'L. L. & POL'Y 83 (2000).
- Gillroy, John Martin, *Adjudication Norms, Dispute Settlement Regimes and International Tribunals: The Status of "Environmental Sustainability" in International Jurisprudence*, 42 STAN. J. INT'L L. 1 (2006).
- Kalas, Peggy Rodgers, *International Environmental Dispute Resolution and the Need for Access by Non-State Entities*, 12 COLO. J. INT'L ENV'T'L. L. & POL'Y 191 (2001).
- Kerbrat, Yann, and Sandrine Maljeau-Dubois, eds., *The Transformation of International Environmental Law* (Portland, OR: Hart Publishing, 2011).
- Lin, Albert C., *The Unifying Role of Harm in Environmental Law*, 2006 WIS. L. REV. 897.
- Mayer, Don, *The Precautionary Principle and International Efforts to Ban DDT*, 9 S.C. ENV'T'L. L.J. 135 (2002).
- Nash, Jonathan Remy, *Too Much Market? Conflict Between Tradable Pollution Allowances and the "Polluter Pays" Principle*, 24 HARV. ENVTL. L. REV. 465 (2000).
- Onzivu, William, *International Environmental Law, the Public's Health, and Domestic Environmental Governance in Developing Countries*, 21 AM. U. INT'L L. REV. 597 (2006).
- Percival, Robert V., *Who's Afraid of the Precautionary Principle?*, 23 PACE ENVTL. L. REV. 21 (2006).
- Rinceanu, Johanna, *Enforcement Mechanisms in International Environmental Law: Quo Vandunt? Homo Sanus in Natura Sana*, 15 J. ENVTL. L. & LITIG. 147 (2000).
- Voigt, Christina, *Sustainable Development as a Principle of International Environmental Law: Resolving Conflicts between Climate Measures and WTO Law* (Boston, MA: Martinus Nijhoff Publishers, 2009).

Chapter 3: State Responsibility for Transboundary Environmental Harm

- Buhi, Jason and Lin Feng, *The International Joint Commission's Role in the United States-Canada Transboundary Air Pollution Control Regime: A Century of Experience to Guide the Future*, 11 VT. J. ENVTL. L. 107 (2009).
- Cassar, Angela Z. & Carl E. Bruch, *Transboundary Environmental Impact Assessment in International Watercourse Management*, 12 N.Y.U. ENVTL. L.J. 169 (2003).
- Dornbos, Jeffrey S., *All (Water) Politics Is Local: A Proposal for Resolving Transboundary Water Disputes*, 22 FORDHAM ENVTL. L. REV. 1 (2010).
- George, Gerald F., *Environmental Enforcement Across National Borders*, 21 NAT. RESOURCES & ENV'T 3 (2006).
- Guruswamy, Lakshman, *State Responsibility in Promoting Environmental Corporate Accountability*, 21 FORDHAM ENVTL. L. REV. 209 (2010).
- Hall, Noah D., *Transboundary Pollution: Harmonizing International and Domestic Law*, 40 U. MICH. J. L. REFORM 681 (2007).
- Hess, Gerald F., *The Trail Smelter, the Columbia River, and the Extraterritorial Application of CERCLA*, 18 GEO. INT'L ENVTL. L. REV. 1 (2005).
- Hsu, Shi-Ling and Austen L. Parrish, *Litigating Canada-U.S. Transboundary Harm:*

Suggestions for Further Reading

- International Environmental Lawmaking and the Threat of Extraterritorial Reciprocity*, 38 VA. J. INT'L L. 1 (2007).
- Kelly, Ryan P. and Margaret R. Caldwell, *Ten Ways States Can Combat Ocean Acidification (and Why They Should)*, 37 HARV. ENVTL. L. REV. 57 (2013).
- Kiss, Alexandre, *State Responsibility and Liability for Nuclear Damage*, 35 DENV. J. INT'L L. & POL'Y 67 (2006).
- Knox, John H., *Assessing the Candidates for a Global Treaty on Transboundary Environmental Impact Assessment*, 12 N.Y.U. ENVTL. L.J. 153 (2003).
- Knox, John H., *The Myth and Reality of Transboundary Environmental Impact Assessment*, 96 AM. J. INT'L L. 291 (2002).
- Mank, Bradford, *Can Plaintiffs Use Multinational Environmental Treaties as Customary International Law to Sue Under the Alien Tort Statute?*, 2007 UTAH L. REV. 1085.
- Mégret, Frédéric, *The Problem of an International Criminal Law of the Environment*, 36 COLUM. J. ENVTL. L. 195 (2011).
- McIntyre, Owen, *The Role of Customary Rules and Principles of International Environmental Law in the Protection of Shared International Freshwater Resources*, 46 NAT. RESOURCES J. 157 (2006).
- Okawa, Phoebe N., *State Responsibility for Transboundary Air Pollution in International Law* (New York: Oxford Univ. Press, 2000).
- Parrish, Austen L., *Trail Smelter Deja Vu: Extraterritoriality, International Environmental Law, and the Search for Solutions to Canadian-U.S. Transboundary Water Pollution Disputes*, 85 B.U. L. REV. 363 (2005).
- Percival, Robert V., *Liability for Environmental Harm and Emerging Global Environmental Law*, 25 MD. J. INT'L L. 37 (2010).
- Pratt, Laura A.W., *Decreasing Dirty Dumping? A Reevaluation of Toxic Waste Colonialism and the Global Management of Transboundary Hazardous Waste*, 35 WM. & MARY ENVTL. L. & POL'Y REV. 581 (2011).
- Robinson-Dorn, Michael J., *The Trail Smelter: Is What's Past Prologue? EPA Blazes New Trail for CERCLA*, 14 N.Y.U. ENVTL. L.J. 233 (2006).
- Sachs, Noah, *Beyond the Liability Wall: Strengthening Tort Remedies in International Environmental Law*, 55 U.C.L.A. L. REV. 837 (2008).
- Waugh, Theodore, *Where Do We Go from Here: Legal Controls and Future Strategies for Addressing the Transportation of Hazardous Waste Across International Borders*, 11 FORDHAM ENVTL. L.J. 477 (2000).

Chapter 4: Climate Change and Protection of the Atmosphere

- Abate, Randall S., *Massachusetts v. EPA and the Future of Environmental Standing in Climate Change Litigation and Beyond*, 33 WM. & MARY ENVTL. L. & POL'Y REV. 121 (2008).
- Attapattu, Sumudu, *Global Climate Change: Can Human Rights (and Human Beings) Survive This Onslaught?*, 20 COLO. J. INT'L ENVTL. L. & POL'Y 35 (2008).
- Bancal, Jean-Charles, *The "Financial Mechanism" & "Flexible Mechanisms" of the United Nations Framework Convention on Climate Change: Faced with Climate Change, the Global Environment Facility and the Carbon Market Take Leading Roles*, 3 APPALACHIAN NAT. RESOURCES L.J. 1 (2009).

Suggestions for Further Reading

- Black, Elizabeth C., *Climate Change Adaptation: Local Solutions for a Global Problem*, 22 GEO. INT'L ENVTL. L. REV. 359 (2010).
- Boyd, William, *Climate Change, Fragmentation, and the Challenges of Global Environmental Law: Elements of a Post-Copenhagen Assemblage*, 32 U. PA. J. INT'L L. 457 (2010).
- Burleson, Elizabeth, *Climate Change Consensus: Emerging International Law*, 34 WM. & MARY ENVTL. L. & POL'Y REV. 543 (2010).
- Butti, Luciano, *The Tortious Road to Liability: A Critical Survey on Climate Change Litigation in Europe and North America*, 11 SUSTAINABLE DEV. L. & POL'Y 32 (2011).
- Christopher, Caleb W., *Success by a Thousand Cuts: The Use of Environmental Impact Assessment in Addressing Climate Change*, 9 VT. J. ENVTL. L. 549 (2008).
- Carlarne, Cinnamon, *Climate Change Policies an Ocean Apart: E.U. and U.S. Climate Change Policies Compared*, 14 PENN ST. ENVTL. L. REV. 435 (2006).
- Cole, Daniel H., *Climate Change, Adaptation, and Development*, 26 U.C.L.A. J. ENVTL. L. & POL'Y 1 (2008).
- Craig, Robin Kundis, "Stationarity is Dead" — Long Live Transformation: Five Principles for Climate Change Adaptation Law, 34 HARV. ENVTL. L. REV. 9 (2010).
- Dembach, John C. and Seema Kakade, *Climate Change Law: An Introduction*, 29 ENERGY L.J. 1 (2008).
- DeSombre, Elizabeth R., *The Experience of the Montreal Protocol: Particularly Remarkable, and Remarkably Particular*, 19 U.C.L.A. J. ENVTL. L. & POL'Y 49 (2001).
- Doelle, Meinhard, *From Hot Air to Action? Climate Change, Compliance and the Future of International Environmental Law* (Toronto: Thomson Carswell, 2005).
- Ferrey, Steven, *Corporate Responsibility and Carbon-Based Life Forms*, 35 B.C. ENVTL. AFF. L. REV. 419 (2008).
- Gerrard, Michael B., *What the Law and Lawyers Can and Cannot Do About Global Warming*, 16 SOUTHEASTERN ENVTL. L.J. 33 (2007).
- Kysar, Douglas A., *Climate Change, Cultural Transformation, and Comprehensive Rationality*, 31 B.C. ENVTL. AFF. L. REV. 555 (2004).
- McGee, Jr., Henry W., *Litigating Global Warming: Substantive Law in Search of a Forum*, 16 FORDHAM ENVTL. L. REV. 371 (2005).
- Osofsky, Hari M., *Climate Change Litigation as Pluralist Legal Dialogue?*, 26A STAN. ENVTL. L. REV. 181 (2007).
- Osofsky, Hari M., *Is Climate Change "International"? Litigation's Diagonal Regulatory Role*, 49 VA. J. INT'L L. 585 (2009).
- Osofsky, Hari M., *The Future of Environmental Law and Complexities of Scale: Federalism Experiments with Climate Change Under the Clean Air Act*, 32 WASH. U. J. L. & POL'Y 79 (2010).
- Osofsky, Hari M., *The Geography of Climate Change Litigation: Implications for Transnational Regulatory Governance*, 83 WASH. U. L. Q. 1789 (2005).
- Owen, Dave *Climate Change and Environmental Assessment Law*, 33 COLUM. J. ENVTL. L. 57 (2008).

Suggestions for Further Reading

- Peloso, Chris, *Crafting an International Climate Change Protocol: Applying the Lessons Learned from the Success of the Montreal Protocol and the Ozone Depletion Problem*, 25 J. LAND USE & ENVTL. L. 305 (2010).
- Ruhl, J.B., *Climate Change Adaptation and the Structural Transformation of Environmental Law*, 40 ENVTL. L. 363 (2010).
- Stewart, Richard B., Michael Oppenheimer, and Bryce Rudyk, *Building Blocks for Global Climate Protection*, 32 STAN. ENVTL. L.J. 341 (2013).
- van Asselt, Harro and Joyeeta Gupta, *Stretching Too Far? Developing Countries and the Role of Flexibility Mechanisms Beyond Kyoto*, 28 STAN. ENVTL. L.J. 311 (2009).
- Vandenbergh, Michael P. and Mark A. Cohen, *Climate Change Governance: Boundaries and Leakage*, 18 N.Y.U. ENVTL. L.J. 221 (2010).
- Wiener, Jonathan B., *Something Borrowed for Something Blue: Legal Transplants and the Evolution of Global Environmental Law*, 27 ECOLOGY L. Q. 1295 (2001).

Chapter 5: Environment, International Trade and Investment

- Barrett, Jr., John A., *The Global Environment and Free Trade: A Vexing Problem and a Taxing Solution*, 76 IND. L.J. 829 (2001).
- Burleson, Elizabeth, *From Fragmentation to Innovation Coordination*, 24 GEO. INT'L ENVTL. L. REV. 477 (2012).
- Burleson, Elizabeth and Winslow Burleson, *Innovation Cooperation: Energy Biosciences and Law*, 2011 U. ILL. L. REV. 651 (2011).
- Carlarne, Cinnamon, *The Kyoto Protocol and the WTO: Reconciling Tensions Between Free Trade and Environmental Objectives*, 17 COLO. J. INT'L ENVTL. L. & POL'Y 45 (2006).
- Chang, Howard F., *Toward a Greener GATT: Environmental Trade Measures and the Shrimp-Turtle Case*, 74 S. CAL. L. REV. 31 (2000).
- Driesen, David M., *What is Free Trade?: The Real Issue Lurking Behind the Free Trade and Environment Debate*, 41 VA. J. INT'L L. 279 (2001).
- Endres, Jody M., *Clearing the Air: The Meta-Standard Approach to Ensuring Biofuels Environmental and Social Sustainability*, 28 VA. ENVTL. L.J. 73 (2010).
- Frischmann, Brett, *A Dynamic Institutional Theory of International Law*, 51 BUFF. L. REV. 679 (2003).
- Gaines, Sanford, *The WTO's Reading of the GATT Article XX Chapeau: A Disguised Restriction on Environmental Measures*, 22 U. PA. J. INT'L ECON. L. 739 (2001).
- Ghei, Nita, *Evaluating the WTO's Two Step Test for Environmental Measures Under Article XX*, 18 COLO. J. INT'L ENVTL. L. & POL'Y 117 (2007).
- Gonzalez, Carmen G., *Genetically Modified Organisms and Justice: The International Environmental Justice Implications of Biotechnology*, 19 GEO. INT'L ENVTL. L. REV. 583 (2007).
- Goyal, Anupam, *The WTO and International Environmental Law: Towards Conciliation* (New Delhi: Oxford Univ. Press, 2006).
- Grosko, Brett, *Genetic Engineering and International Law: Conflict or Harmony? An Analysis of the Biosafety Protocol, GATT, and the WTO Sanitary and Phytosanitary Agreement*, 20 VA. ENVTL. L.J. 295 (2001).
- Howse, Robert, *The Appellate Body Rulings in the Shrimp/Turtle Case: A New Legal*

Suggestions for Further Reading

- Baseline for the Trade and Environment Debate*, 27 COLUM. J. ENVTL. L. 491 (2002).
- Kennedy, Kevin C., *Why Multilateralism Matters in Resolving Trade-Environment Disputes*, 7 WIDENER L. SYMP. J. 31 (2001).
- Knox, John H., *The Judicial Resolution of Conflicts Between Trade and the Environment*, 28 HARV. ENVTL. L. REV. 1 (2004).
- Lallas, Peter L., *The Role of Process and Participation in the Development of Effective International Environmental Agreements: A Study of the Global Treaty on Persistent Organic Pollutants (POPs)*, 19 U.C.L.A. J. ENVTL. L. & POL'Y 83 (2001).
- Mintz, Joel A., *Two Cheers for Global POPs: A Summary and Assessment of the Stockholm Convention on Persistent Organic Pollutants*, 14 GEO. INT'L ENVTL. L. REV. 319 (2001).
- Scott, Joanne, *International Trade and Environmental Governance: Relating Rules (and Standards) in the EU and the WTO*, 15 EUR. J. INT'L L. 307 (2004).
- Shaffer, Gregory C., *The World Trade Organization Under Challenge: Democracy and the Law and Politics of the WTO's Treatment of Trade and Environment Matters*, 25 HARV. ENVTL. L. REV. 1 (2001).
- Silva-Send, Nilmini, *Climate Change Disputes at the World Trade Organization: National Energy Policies and International Trade Liability*, 4 SAN DIEGO J. CLIMATE & ENERGY L. 195 (2013).
- Steinberg, Richard H., ed., *The Greening of Trade Law: International Trade Organizations and Environmental Issues* (Lanham, MD: Rowan & Littlefield Publishers, Inc., 2002).
- Stewart, Terence P. and David S. Johanson, *A Nexus of Trade and the Environment: The Relationship Between the Cartagena Protocol on Biosafety and the SPS Agreement of the World Trade Organization*, 14 COLO. J. INT'L ENVTL. L. & POL'Y 1 (2003).
- Thomas, Chantal, *Should the World Trade Organization Incorporate Legal and Environmental Standards?*, 61 WASH. & LEE L. REV. 347 (2004).
- VanderZwaag, David L., *The Precautionary Approach and the International Control of Toxic Chemicals: Beacon of Hope, Sea of Confusion and Dissolution*, 33 HOUS. J. INT'L L. 605 (2011).
- Vinuales, Jorge E., *Legal Techniques for Dealing with Scientific Uncertainty in Environmental Law*, 43 VAND. J. TRANSNAT'L L. 437 (2010).
- Vranes, Erich, *Trade and the Environment: Fundamental Issues in International Law, WTO Law, and Legal Theory* (New York: Oxford Univ. Press, 2009).

Chapter 6: Freshwater Resources

- Baillat, Aline, *International Trade in Water Rights: The Next Step* (London: IWA Publishing, 2010).
- Bernauer, Thomas and Anna Kalbhenn, "The Politics of International Freshwater Resources." *The International Studies Encyclopedia* (Washington D.C.: The International Studies Assn., 2010).
- Bruch, Carl, ed., *Public Participation in the Governance of International Freshwater Resources* (Tokyo: United Nations Univ. Press, 2005).

Suggestions for Further Reading

- Burchi, Stefano and Kerstin Mechlem, *Groundwater in International Law: Compilation of Treaties and Other Legal Instruments* (Rome: FAO, 2005).
- De Chazournes, Laurence Boisson, Christina Leb, and Mara Tignino, eds., *International Law and Freshwater: The Multiple Challenges* (Northampton, MA: Edward Elgar Publishing, 2013).
- Dickson, Barnabas and Jon Hutton, eds., *Endangered Species Threatened Convention: The Past, Present and Future of CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora* (London: Routledge, 2013).
- Dinar, Shlomi, *International Water Treaties: Negotiation and Cooperation Along Transboundary Rivers* (New York: Routledge, 2007).
- Earle, Anton, Anders Jägerskog, and Joakim Öjendal, eds., *Transboundary Water Management: Principles and Practice* (New York: Earthscan, 2010).
- Eckstein, Gabriel, *Protecting a Hidden Treasure: The UN International Law Commission and the International Law of Transboundary Ground Water Resources*, 5 AM. UNIV. SUSTAINABLE DEV. L. & POL'Y 5 (2005).
- Fernandez, Linda, *Solving Water Pollution Problems Along the US-Mexico Border*, 7 ENV'T. & DEV. ECON. 715 (2002).
- Fischhendler, Itay, *Legal and Institutional Adaptation to Climate Uncertainty: A Study of International Rivers*, 6 WATER POL'Y 281 (2004).
- Giordano, Meredith A., *Managing the Quality of International Rivers: Global Principles and Basin Practice*, 43 NAT. RESOURCES J. 111 (2003).
- Giordano, Meredith A. and Aaron T. Wolf, *Sharing Waters: Post-Rio International Water Management*, 27 NATURAL RESOURCES FORUM 163 (2003).
- Hildering, Antoinette, *International Law, Sustainable Development and Water Management* (Delft, Netherlands: Eburon, 2004).
- Iza, Alejandro, ed., *"International Water Governance: Conservation of Freshwater Ecosystems: Volume 1: International Agreements, Compilation and Analysis"* (Gland, Switzerland: IUCN 2004).
- McCaffrey, Stephen *The Contribution of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses*, 13 INT'L J. OF GLOBAL ENV'T'L. ISSUES 250 (2001).
- McCaffrey, Stephen, *"The Need for Flexibility in Freshwater Treaty Regimes."* 27 NAT. RESOURCES F. 156 (2003).
- McIntyre, Owen, *The Role of Customary Rules and Principles of International Environmental Law in the Protection of Shared International Freshwater Resources*, 46 NAT. RESOURCES J. 157 (2006).
- Paisley, Richard, *Adversaries into Partnerships: International Water Law and the Equitable Sharing of Downstream Benefits*, 3 MELBOURNE J. OF INT'L L. 280 (2002).
- Parrish, Austen, *Trail Smelter Deja Vu: Extraterritoriality, International Environmental Law, and the Search for Solutions to Canada-US Transboundary Water Pollution Disputes*, 85 BOSTON U. L. REV. (2005).
- Priscoli, Jerome Delli, *Managing and Transforming Water Conflicts* (New York: Cambridge Univ. Press, 2009).
- Weiss, Brown Edith, Laurence Boisson de Chazournes, and Nathalie Bernasconi-

Suggestions for Further Reading

Osterwalder. *Fresh Water and International Economic Law* (New York: Oxford Univ. Press 2005).

Chapter 7: Protection of the Marine Environment

- Alcock, Frank, “UNCLOS, Property Rights, and Effective Fisheries Management.” *Managing Institutional Complexity: Regime Interplay and Global Environmental Change*. Eds. Sebastian Oberthür and Olav Schram Stokke (Cambridge, MA: MIT Press, 2011).
- Baird, Rachel, Meredith Simons, and Tim Stephens, *Ocean Acidification: A Litmus Test for International Law*, 3 CARBON & CLIMATE L. REV. 459 (2009).
- Balton, David A. and Holly R. Koehler, *Ocean and Fisheries Law: Reviewing the United Nations Fish Stocks Treaty*, 7 SUSTAINABLE DEV. L. & POL’Y 5 (2006).
- Boyle, Alan, *Further Development of the Law of the Sea Convention: Mechanisms for Change*, 54 INT’L & COMP. L. Q. 563 (2005).
- Chung, Suh-Yong, *Is the Convention-Protocol Approach Appropriate for Addressing Regional Marine Pollution?: The Barcelona Convention System Revisited*, 13 PENN ST. ENVTL. L. REV. 85 (2004).
- Crothers, G.T. and Lindie Nelson, *High Seas Fisheries Governance: A Framework for the Future?*, MARINE RESOURCE ECON. 21.4 (2006): 341.
- Cullis-Suzuki, Sarika and Daniel Pauly, *Failing the High Seas: A Global Evaluation of Regional Fisheries Management Organizations*, 34 MARINE POL’Y 1036 (2010).
- Davies, Andrew J., J. Murray Roberts, and Jason Hall-Spencer, *Preserving Deep-Sea Natural Heritage: Emerging Issues in Offshore Conservation and Management*, 138 BIOLOGICAL CONSERVATION 299 (2007).
- Jacobsson, Mans, *The International Liability and Compensation Regime for Oil Pollution from Ships — International Solutions for a Global Problem*, 32 TULANE MAR. L.J. 1 (2007).
- Kaye, Stuart, *Implementing High Seas Biodiversity Conservation: Global Geopolitical Considerations*, 28 MARINE POL’Y 221 (2004).
- Klein, Natalie S., *Dispute Settlement in the UN Convention on the Law of the Sea* (New York: Cambridge Univ. Press, 2005).
- Knudsen, Olav F. and Björn Hassler, *IMO Legislation and Its Implementation: Accident Risk, Vessel Deficiencies and National Administrative Practices*, 35 MARINE POL’Y 201 (2011).
- Nelson, L.D.M., *The Settlement of Disputes Arising from Conflicting Outer Continental Shelf Claims*, 24 INT’L J. OF MARINE & COASTAL L. 409 (2009).
- Rothwell, Donald and Tim Stephens, *The International Law of the Sea* (Oxford: Hart Publishing, 2010).
- Schoenbaum, Thomas J., *Liability for Damages in Oil Spill Accidents: Evaluating the USA and International Law Regimes in the Light of Deepwater Horizon*, 24 J. OF ENVT’L. L. 395 (2012).
- Schoenbaum, Thomas J., *The Deepwater Horizon Oil Spill in the Context of the Public International Law Regimes for the Protection of the Marine Environment: A Comparative Study*, 25 U.S.F. MAR. L.J. 25 1 (2012).
- Sumaila, Ussif Rashid, et al., *Potential Costs and Benefits of Marine Reserves in the High Seas*, 345 MARINE ECOLOGY PROGRESS SERIES 305 (2007).

Suggestions for Further Reading

- Tan, Alan Khee-Jin, *Vessel-Source Marine Pollution: the Law and Politics of International Regulation*. New York: Cambridge Univ. Press, 2006.
- Wang, Hanling, *Ecosystem Management and Its Application to Large Marine Ecosystems: Science, Law, and Politics*, 35 OCEAN DEV. & INT'L L. 41 (2004).
- Warner, Robin, *Protecting the Oceans Beyond National Jurisdiction: Strengthening the International Law Framework*. Vol. 3. Leiden, Netherlands: Brill, 2009.

Chapter 8: Protection of Biological Diversity

- Abensperg-Traun, Max, *CITES, Sustainable Use of Wild Species and Incentive-Driven Conservation in Developing Countries, with an Emphasis on Southern Africa*, 142 BIOLOGICAL CONSERVATION 948 (2009).
- Chivian, Eric, and Aaron Bernstein, eds., *Sustaining Life: How Human Health Depends on Biodiversity* (New York: Oxford Univ. Press, 2008).
- Dickson, Barnabas, *International Conservation Treaties, Poverty and Development: The Case of CITES*, 74 NAT. RESOURCE PERSPECTIVES 1 (2002).
- Gehring, Thomas and Eva Ruffing, *When Arguments Prevail over Power: The CITES Procedure for the Listing of Endangered Species*, 8 GLOBAL ENVTL. POL. 123 (2008).
- Greiber, Thomas, et al. *An Explanatory Guide to the Nagoya Protocol on Access and Benefit-Sharing* (Gland, Switzerland: IUCN, 2012).
- Joseph, Reji *International Regime on Access and Benefit Sharing: Where are We Now?*, 12 ASIAN BIOTECHNOLOGY & DEV. REV. 77 (2010).
- Kamau, Evanson, Bevis Fedder, and Gerd Winter, *The Nagoya Protocol on Access to Genetic Resources and Benefit Sharing: What Is New and What Are the Implications for Provider and User Countries and the Scientific Community?*, 6 L. & DEV. J. 248 (2010).
- Kamau, Evanson C., and Gerd Winter, eds., *Genetic Resources, Traditional Knowledge and the Law: Solutions for Access and Benefit Sharing* (London: Earthscan, 2009).
- Laikre, Linda, et al, *Neglect of Genetic Diversity in Implementation of the Convention on Biological Diversity*, 24 CONSERVATION BIOLOGY 86 (2010).
- Lenzen, M., et al, *International Trade Drives Biodiversity Threats in Developing Nations*, 486 NATURE 109 (2012).
- Loreau, Michel, et al., *Diversity Without Representation*, 442 NATURE 245 (2006).
- McManis, Charles, *Biodiversity and the Law: Intellectual Property, Biotechnology and Traditional Knowledge* (London: Earthscan, 2012).
- Naeem, Shahid, J. Emmett Duffy, and Erika Zavaleta, *The Functions of Biological Diversity in an Age of Extinction*, 336 SCI. 1401 (2012).
- Nagle, John, *The Effectiveness of Biodiversity Law*, 24 J. OF LAND USE AND ENVTL. L. 203 (2009).
- Najam, Adil, "Negotiating Desertification." *Governing Global Desertification: Linking Environmental Degradation, Poverty and Participation* (Aldershot, UK: Ashgate, 2006).
- Nasi, R., et al., *CBD Technical Series No. 33: Conservation and Use of Wildlife-Based Resources: the Bushmeat Crisis* (Montreal: Secretariat of the Convention on Biological Diversity, 2008).
- Phelps, Jacob, et al., *Boosting CITES*, 330 SCI. 1752 (2010).

Suggestions for Further Reading

- Reeve, Rosalind, *Wildlife Trade, Sanctions and Compliance: Lessons from the CITES Regime*, 82 INT'L AFFAIRS 881 (2006).
- Sajeva, Maurizio, et al., *Regulating Internet Trade in CITES Species*, 27 CONSERVATION BIOLOGY 429 (2013).
- Sand, Peter H., *Japan's 'Research Whaling' in the Antarctic Southern Ocean and the North Pacific Ocean in the Face of the Endangered Species Convention (CITES)*, REV. OF EUROPEAN COMMUNITY & INT'L ENVTL. L. 17.1 (2008): 56–71.
- Stringer, Lindsay, *Can the UN Convention to Combat Desertification Guide Sustainable Use of the World's Soils?*, 6 FRONTIERS IN ECOLOGY & THE ENV'T 138 (2008).
- Sutherland, W.J., et al., *One Hundred Questions of Importance to the Conservation of Global Biological Diversity*, 23 CONSERVATION BIOLOGY 557 (2009).

Chapter 9: Polar Regions

- Baird, Rachel, *CCAMLR Initiatives to Counter Flag State Non-Enforcement in Southern Ocean Fisheries*, 36 VICTORIA U. OF WELLINGTON L. REV. 733 (2005).
- Bargagli, R., *Environmental Contamination in Antarctic Ecosystems*, 400 SCI. OF THE TOTAL ENV'T 212 (2008).
- Bastmeijer, Kees, "A Long Term Strategy for Antarctic Tourism: The Key to Decision Making within the Antarctic Treaty System?" *Polar Tourism: Human, Environmental and Governance Dimensions*. Eds. Patrick Maher, Emma Stewart, and Michael Lück (Elmsford, NY: Cognizant Communication Corp., 2011).
- Byers, Michael and Suzanne Lalonde, *Who Controls the Northwest Passage*, 42 VANDERBILT J. OF TRANSNAT'L L. 1133 (2009).
- Chown, Steven L., et al., *Challenges to the Future Conservation of the Antarctic*, 337 SCI. 158 (2012).
- Dodds, Klaus, *Governing Antarctica: Contemporary Challenges and the Enduring Legacy of the 1959 Antarctic Treaty*, 1 GLOBAL POL'Y 108 (2010).
- Fabra, Adriana and Virginia Gascón, *The Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Ecosystem Approach*, 23 INT'L J. OF MARINE & COASTAL L. 567 (2008).
- Gascón, Virginia and Rodolfo Werner, *CCAMLR and Antarctic Krill: Ecosystem Management Around the Great White Continent*, 7 SUSTAINABLE DEV. L. & POL'Y 14 (2006).
- Hassan, Daud, *Climate Change and the Current Regimes of Arctic Fisheries Resources Management: An Evaluation*, 40 J. MAR. L. & COM. 511 (2009).
- Herber, Bernard P., *Bioprospecting in Antarctica: The Search for a Policy Regime*, 42 POLAR REC. 139 (2006).
- Holmes, Stephanie, *Breaking the Ice: Emerging Legal Issues in Arctic Sovereignty*, 9 CHI. J. INT'L L. 323 (2008).
- Jarashow, Mark, Michael B. Runnels, and Tait Svenson, *UNCLOS and the Arctic: The Path of Least Resistance*, 30 FORDHAM INT'L L.J. 1587 (2006).
- Jensen, Oystein, *Arctic Shipping Guidelines: Towards a Legal Regime for Navigation Safety and Environmental Protection?*, 44 POLAR REC. 107(2008).
- Koivurova, Timo, *Limits and Possibilities of the Arctic Council in a Rapidly Changing Scene of Arctic Governance*, 46 POLAR REC. 146 (2010).

Suggestions for Further Reading

- Koivurova, Timo and David Vanderzwaag, *The Arctic Council at 10 Years: Retrospect and Prospects*, 40 U. OF BRITISH COLUMBIA L. REV. 121 (2007).
- Koivurova, Timo, *Environmental Protection in the Arctic and Antarctic: Can the Polar Regimes Learn From Each Other?*, 33 INT'L J. OF LEGAL INFO. 204 (2005).
- Lennon, Erika, *A Tale of Two Poles: A Comparative Look at the Legal Regimes in the Arctic and the Antarctic*, 8 SUSTAINABLE DEV. L. & POL'Y 32 (2007).
- Pharand, Donat, *The Arctic Waters and the Northwest Passage: A Final Revisit*, 38 OCEAN DEV. & INT'L L. 3 (2007).
- Rayfuse, Rosemary, *Protecting Marine Biodiversity in Polar Areas Beyond National Jurisdiction*, 17 REV. OF EUROPEAN COMMUNITY AND INT'L ENVTL. L. 3 (2008).
- Rothwell, Donald *The Arctic in International Law: Time for a New Regime?* (2008) (ANU College of Law Research Paper 08-37).
- Young, Oran, R. *Arctic in Play: Governance in a Time of Rapid Change*, 24 INT'L J. OF MARINE & COASTAL L. 423 (2009).

Chapter 10: The Environmental Responsibility of Non-State Actors

- Baughn, C. Christopher and John C. McIntosh, *Corporate Social and Environmental Responsibility in Asian Countries and Other Geographical Regions*, 14 CORP. SOC. RESP. & ENVTL. MGMT. 189 (2007).
- Bernstein, Steven, *Legitimacy in Global Environmental Governance*, 1 J. OF INT'L L. & INT'L REL. 139 (2004).
- Betsill, Michele Merrill and Elizabeth Corell, eds., *NGO Diplomacy: The Influence of Nongovernmental Organizations in International Environmental Negotiations* (Cambridge, MA: The MIT Press, 2008).
- Carrasco, Enrique R. and Alison K. Guernsey, *The World Bank's Inspection Panel: Promoting True Accountability Through Arbitration*, 41 CORNELL INT'L L.J. 594 (2008).
- Cashore, Benjamin, et al., *Can Non-State Governance 'Ratchet Up' Global Environmental Standards? Lessons from the Forest Sector*, 16 REV. OF EUROPEAN COMMUNITY & INT'L ENVTL. L. 158 (2007).
- Cashore, Benjamin, *Legitimacy and the Privatization of Environmental Governance: How Non — State Market — Driven (NSMD) Governance Systems Gain Rule-Making Authority*, 15 GOVERNANCE 503 (2002).
- Clapp, Jennifer, *Global Environmental Governance for Corporate Responsibility and Accountability*, 5 GLOBAL ENVTL. POL. 23 (2005).
- Clark, Dana, Jonathan A. Fox, and Kay Treacle, eds. *Demanding Accountability: Civil-Society Claims and the World Bank Inspection Panel* (Lanham, MD: Rowman & Littlefield, 2003).
- Fisher, Dana R. and Jessica F. Green, *Understanding Disenfranchisement: Civil Society and Developing Countries' Influence and Participation in Global Governance for Sustainable Development*, 4(3) GLOBAL ENVTL. POL. 65 (2004).
- Gemmill, Barbara, and Abimbola Bamidele-Izu, "The Role of NGOs and Civil Society in Global Environmental Governance." *Global Environmental Governance: Options & Opportunities*. Eds. D. C. Esty and M. H. Ivanova (New Haven, CT: Yale Center for Environmental Law and Policy, 2002).
- Glasbergen, Pieter, Frank Biermann, and Arthur PJ Mol, eds., *Partnerships, Gover-*

Suggestions for Further Reading

- nance and Sustainable Development: Reflections on Theory and Practice* (Edward Elgar Publishing, 2007).
- Gutner, Tamar, *Explaining the Gaps Between Mandate and Performance: Agency Theory and World Bank Environmental Reform*, 5 GLOBAL ENVTL. POL. 10 (2005).
- Hale, Thomas, “World Bank Inspection Panel.” *The Handbook of Transnational Governance: Institutions and Innovations*. Eds. Thomas Hale and David Held (Hoboken, NJ: Wiley, 2011).
- Heledd Jenkins and Natalia Yakovleva, *Corporate Social Responsibility in the Mining Industry: Exploring Trends in Social and Environmental Disclosure*, 14 J. OF CLEANER PRODUCTION 271 (2006).
- Levy, David Laurence, and Peter John Newell, eds., *The Business of Global Environmental Governance* (Cambridge, MA: The MIT Press, 2005).
- Melnyk, Steven A. Robert P. Sroufe, and Roger Calantone, *Assessing the Impact of Environmental Management Systems on Corporate and Environmental Performance*, 21 J. OF OPERATIONS MGMT. 329 (2003).
- Nielson, Daniel L. and Michael J. Tierney, *Delegation to International Organizations: Agency Theory and World Bank Environmental Reform*, 57 INT’L ORG. 241 (2003).
- Oldenziel, Joris, Joseph Wilde-Ramsing, and Patricia Feeney, *10 Years on: Assessing the Contribution of the OECD Guidelines for Multinational Enterprises to Responsible Business Conduct* (Paris: OECD Watch, 2010).
- Prakash, Aseem and Matthew Potoski, *Racing to the Bottom? Trade, Environmental Governance, and ISO 14001*, 50 AM. J. OF POL. SCI. 350 (2006).
- Prakash, Aseem and Matthew Potoski, *Investing Up: FDI and the Cross-Country Diffusion of ISO 14001 Management Systems*, 51 INT’L STUD. Q. 723 (2007).

Table of Contents

Chapter 1	INTRODUCTION AND BACKGROUND	1
§ I.	INTERNATIONAL ENVIRONMENTAL LAW DEFINED	1
§ II.	THE HISTORY AND DEVELOPMENT OF INTERNATIONAL ENVIRONMENTAL LAW	1
A.	The Beginning: 1972 to 1992	1
	Declaration of the United Nations Conference on the Human Environment	2
	Notes and Questions	7
	<i>The Development of International Environmental Law Between the Stockholm Conference and the United Nations Conference on Environment and Development (1992)</i>	10
B.	From Rio de Janeiro (1992) to Johannesburg (2002)	15
1.	The 1992 United Nations Conference on Environment and Development	16
	<i>United Nations Conference on Environment and Development, The Global Partnership for Environment and Development: A Guide to Agenda 21</i>	17
	Notes	20
	Problem 1-1 The Movement to “Stop Agenda 21”	22
2.	The World Summit on Sustainable Development: Johannesburg, 2002	24
	Notes	28
C.	The United Nations Conference on Sustainable Development, 2012: Rio +20	29
III.	Green economy in the context of sustainable development and poverty eradication	30
VI.	Means of implementation	32
	Notes and Questions	34
§ III.	INTERNATIONAL ENVIRONMENTAL GOVERNANCE	34
	<i>United Nations Environment Programme</i>	39
	Notes and Questions	43
§ IV.	SCIENCE AND TECHNOLOGY	45
A.	The Science of Ecology	45
B.	Science as a Guide to Decisionmaking	48
C.	Science and Technology as Solutions	48
§ V.	ENVIRONMENTAL ETHICS	49
	Note and Question	51
§ VI.	ENVIRONMENTAL POLITICS AND ECONOMICS	51

Table of Contents

A.	Theories of Interdependence	51
B.	The Problem of Social Costs	53
	<i>Organization for Economic Cooperation and Development</i>	57
	Problem 1-2 Choice of Legal Instruments to Combat Carbon	
	<i>Emissions</i>	63
	Notes and Questions	64
Chapter 2	GENERAL INTERNATIONAL ENVIRONMENTAL	
	LAW	67
§ I.	INTRODUCTION	67
A.	The Contours of International Environmental Law	67
B.	Public International Law	68
1.	Treaties	68
2.	Multilateral Environmental Agreements (MEAs)	70
3.	Customary International Law	71
4.	General Principles of Law	72
5.	Case Law	72
	<i>North Sea Continental Shelf Cases (Federal Republic of Germany v. Denmark) (Federal Republic of Germany v. Netherlands)</i>	73
	Notes and Questions	84
	<i>Legality of the Threat or Use of Nuclear Weapons</i>	87
	Notes and Questions	95
§ II.	“SOFT LAW”	95
A.	Principles of International Environmental Law	98
B.	The Rio Declaration	98
	Note: The Legal Status of the Rio Principles	105
1.	The Harm Prevention Principle	106
2.	Sustainable Development	107
	<i>Case Concerning the Gabčíkovo-Nagymaros Project (Hungary v. Slovakia)</i>	108
	Notes and Questions	121
3.	The Precautionary Principle	123
	<i>Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)</i>	124
	Notes and Questions	130
4.	Intergenerational Equity	132
	<i>Oposa v. Fulgencia S. Factoran, Jr.</i>	133
	Notes and Questions	135
5.	The Environmental Impact Assessment Principle	136
	<i>Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)</i>	137

Table of Contents

	Notes and Questions	144
6.	The Polluter-Pays Principle	144
	<i>Vellore Citizens Welfare Forum v. Union of India</i>	145
	Notes and Questions	147
7.	The Duty to Notify	148
8.	The Duty to Cooperate in Good Faith	148
9.	The Duty of Public Participation	149
	Question	149
§ III.	INTERNATIONAL LAW AND DOMESTIC LAW	149
	<i>State of Missouri v. Holland</i>	151
	<i>Commonwealth of Australia v. State of Tasmania</i> (<i>The Tasmanian Dam Case</i>)	154
	Notes and Questions	156
§ IV.	THE ENFORCEMENT AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL LAW	158
	<i>Syndicat Professionnel Coordination Des Pêcheurs De L'Étang De Berre</i> <i>Et De La Région v. Électricité De France (EDF)</i>	160
	Notes and Questions	169
§ V.	COMPLIANCE AND DISPUTE SETTLEMENT	169
	<i>Compliance and Dispute Settlement Provisions in the WTO and in</i> <i>Multilateral Environmental Agreements The World Trade Organization</i> <i>Committee on Trade and Environment Note by the WTO and UNEP</i> <i>Secretariats</i>	171
	Notes and Questions	185
	Problem 2-1 Negotiating a Compliance Regime for the Nagoya Protocol	185
	Problem 2-2 Stopping Japan From Killing Whales	186
Chapter 3	STATE ENVIRONMENTAL RESPONSIBILITY AND TRANSBOUNDARY HARM	189
§ I.	INTRODUCTION	189
§ II.	CASES	190
A.	Border Pollution	190
	<i>Trail Smelter Case (United States v. Canada)</i>	190
	Notes and Questions	199
	<i>A Trail Smelter Update</i>	202
	<i>United Nations Economic Commission for Europe Background</i> <i>Document for Workshop on Transboundary Pollution to be Held In</i> <i>Budapest</i>	204
	Note on State Environmental Responsibility	211
	Problem 3-1 Wastewater Pollution Along the Mexican Border	213

Table of Contents

	Note on Transboundary Pollution Emanating from the United States	217
	Conclusions	218
B.	The Duty to Notify/Warn	218
	<i>The Corfu Channel Case (United Kingdom v. Albania)</i>	218
	Notes and Questions	222
	Note on the Obligation to Inform, Warn, Consult, and Cooperate with Respect to Transboundary Environmental Harm	222
C.	Areas Beyond National Jurisdictions	223
	<i>The Nuclear Tests Case (Australia v. France)</i>	223
	<i>Nuclear Test Case (Australia v. France)</i>	226
	Notes and Questions	230
	Note on Transboundary Harm Beyond the Limits of National Jurisdictions	232
§ III.	CODIFICATIONS AND SPECIALIZED TREATY REGIMES	232
A.	Principles of State Responsibility for Environmental Harm	233
	Problem 3-2 The Chernobyl Nuclear Reactor Incident	233
	Note on the Duty to Notify and Assist in Case of a Nuclear Accident	237
B.	Specialized International Agreements Providing for Liability for Transboundary Environmental Harm	237
	Question	238
§ IV.	ENVIRONMENT IMPACT ASSESSMENT IN A TRANSBOUNDARY CONTEXT	238
	Problem 3-3 Building a Nuclear Power Plant on the Austrian Border	238
	<i>Convention on Environmental Impact Assessment in a Transboundary Context</i>	239
	Notes and Questions	252
Chapter 4	PROTECTION OF THE ATMOSPHERE AND THE CLIMATE	253
§ I.	INTRODUCTION	253
	Notes and Questions	257
§ II.	LONG RANGE TRANSBOUNDARY POLLUTION	258
	Problem 4-1 Creating a Regime to Combat Long-Range Transboundary Air Pollution	259
A.	North America	259
	Marilynn K. Roberts, <i>Acid Rain Regulation: Federal Failure and State Success</i>	259
	<i>Her Majesty the Queen in Right of Ontario v. U.S. Environmental Protection Agency</i>	263

Table of Contents

	Note on the Control of International and Interstate Pollution Under the Clean Air Act	265
	<i>Canada-United States Agreement on Air Quality</i>	265
	Note on Trading SO ₂ Allowances	275
	<i>Joint Statement Marking the 20th Anniversary of the US-Canada Air Quality Agreement</i>	276
B.	Europe	277
	<i>The Convention on Long-Range Transboundary Air Pollution</i> (1979)	277
	<i>Comparison of the European and U.S. Approaches Towards Acidification, Eutrophication and Ground Level Ozone</i>	278
	Notes and Questions	286
C.	Other Regions	287
	Note on Asian Smog	287
	<i>ASEAN Agreement on Transboundary Haze Pollution (2002)</i>	288
	Note and Question	290
§ III.	PROTECTING THE OZONE LAYER	290
A.	Introduction	290
B.	<i>The Montreal Protocol on Substances that Deplete the Ozone Layer</i> (1987)	293
	<i>The Montreal Protocol on Substances that Deplete the Ozone Layer</i>	297
C.	Major Elements of the Ozone Regime	307
1.	The Multilateral Fund	307
	<i>The Montreal Protocol on Substances that Deplete the Ozone Layer</i>	307
	Questions	309
2.	Assessment Panels	309
	<i>United Nations Environment Programme Ozone Secretariat</i>	309
3.	The Non-Compliance Procedure	310
	<i>Non-Compliance Procedure (1998)</i>	310
	Questions	313
4.	Critical Use and Essential Use Exemptions	313
	Problem 4-2 A Critical Use Exemption (CUE) for Methyl Bromide	318
	Problem 4-3 Controlled Substances in Air-Conditioning and Refrigeration Appliances	326
	Problem 4-4 Using the Montreal Protocol to Fight Climate Change	328
	Note and Questions	331
D.	Evaluating the Montreal Protocol	331

Table of Contents

	Ozone Action	332
§ IV.	CLIMATE CHANGE	336
A.	Our Changing Climate	336
	<i>The Fifth Climate Assessment Report of the Intergovernmental Panel on Climate Change, 2013–2014</i>	337
	<i>IPCC Working Group I: Contribution to the IPCC Fifth Assessment Report, Climate Change 2013, the Physical Science Basis</i>	338
	<i>IPCC Press Release</i>	339
	Notes and Questions	342
B.	Causes of Climate Change	347
	<i>Intergovernmental Panel on Climate Change, Fourth Assessment Report, Climate Change, Summary for Policy Makers</i>	352
C.	Sources of Emissions of Greenhouse Gases	355
1.	Global emissions by gas	355
2.	Global emissions by source	356
3.	Global emissions by country	356
	Note	357
	Note on us Greenhouse Gas Emissions	357
D.	Future Emissions Scenarios, Future Climate Projections, and Potential Impacts	358
	<i>Intergovernmental Panel on Climate Change, Fifth Assessment Report, Climate Change, Summary for Policymakers</i>	358
	Note on Potential Impacts of Climate Change	359
	<i>The Role of Lawyers Advising Clients on Climate Change</i>	364
E.	Options for Dealing with Climate Change: Adaptation and Mitigation .	365
1.	Adaptation	365
	Problem 4-5 Formulating a Climate Change Adaptation Plan for the United States	367
2.	Mitigation	367
(a)	Abatement Strategies	368
(b)	Sequestration Strategies	370
3.	Cost of Mitigation	371
4.	Case Study: The European Union Emissions Trading Scheme	372
	<i>The European Commission, the EU Emissions Trading Scheme . .</i>	373
	Notes and Questions	378
	Note on the Application of the EU-ETS to International Aviation .	380
	Evaluating the European Union’s Emissions Trading Scheme . . .	381
F.	The Ethics of Climate Change and the Divide Between the Developed and Developing World	382
	<i>Doha Conference of the Parties to the UNFCCC</i>	383
	Notes and Questions	385

Table of Contents

G.	<i>The United Nations Framework Convention on Climate Change (UNFCCC)</i>	385
H.	The Kyoto Protocol	388
	Problem 4-6 How to Determine a Kyoto Protocol Party's "Assigned Amount Units"	392
	Problem 4-7 Taking Advantage of the Sink Provisions of the Kyoto Protocol	393
	Problem 4-8 Options for Complying with the Kyoto Protocol	397
I.	Compliance with the Kyoto Protocol	397
	<i>An Introduction to the Kyoto Protocol Compliance Mechanism</i>	397
	<i>Background Paper on Information on Trends in Relation to the Commitments Under Article 3, Paragraph 1, of the Kyoto Protocol Found in Reports of the In-Depth Reviews of the Fifth National Communications of Parties Included in Annex I</i>	400
	Notes and Questions	402
	<i>Evaluating the Kyoto Protocol</i>	402
J.	The Copenhagen Accord: A New Approach	403
	<i>The Copenhagen Accord</i>	404
	<i>Summary of Main Points of the Copenhagen Accord</i>	407
	<i>Response to the Copenhagen Accord</i>	408
	Notes and Questions	414
K.	Reducing Emissions from Deforestation and Forest Degradation (REDD)	414
1.	The Development and Elements of REDD-Plus	415
	<i>Outcome of the Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention</i>	415
	<i>Outcome of the Work of the Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention</i>	418
	Notes and Questions	419
2.	Institutions and Demonstration Projects	420
3.	Where Will the Money Come from?	422
(a)	Non-market based financing	422
(b)	Market-based financing	422
	Problem 4-9 A Law Student Contemplates Investing in the Voluntary Carbon Markets	424
	Problem 4-10 Promoting Redd-Plus in Indonesia	424
L.	The United States' Implementation of Its Copenhagen Pledge	425
	<i>Massachusetts v. Environmental Protection Agency</i>	426
	Note	436
1.	The President's Climate Action Plan	437
	<i>The President's Climate Action Plan Executive Office of the</i>	

Table of Contents

	<i>President</i>	437
2.	Action by the States	443
3.	Additional Climate Change Legal Tools	444
M.	The Doha Gateway: The Second Commitment Period of the Kyoto Protocol	445
	Notes and Questions	447
N.	Summary: The Future	448
	Problem 4-11 The Paris 2015 Conference of the Parties (COP 21): Drafting a Fair and Balanced, Binding Agreement for the Third Commitment Period, a Class Simulation	449
	<i>Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions</i>	451
Chapter 5	ENVIRONMENT, TRADE, AND INVESTMENT	455
§ I.	INTRODUCTION	455
	<i>Environmentalism Trade Demands: A Critical Analysis</i>	459
	<i>The Environmental Impact of Trade</i>	460
	Notes and Questions	461
§ II.	THE INSTITUTIONS AND CORE PRINCIPLES OF INTERNATIONAL TRADE	462
	<i>General Agreement on Tariffs and Trade (GATT)</i>	465
	Notes and Questions	466
	<i>United States — Standards for Reformulated and Conventional Gasoline</i>	467
	Notes and Questions	475
§ III.	WILDLIFE, NATURAL RESOURCES, AND POLLUTION	476
	Problem 5-1 Amazonia Seeks Global Environmental Reforms	476
	<i>The Tuna Dolphin Cases: A False Start</i>	477
	<i>United States — Import Prohibition of Certain Shrimp and Shrimp Products</i>	478
	<i>United States — Import Prohibition of Certain Shrimp and Shrimp Products Recourse to Article 21.5</i>	489
	<i>China — Measures Related to the Exportation of Various Raw Materials</i>	494
	Notes and Questions	500
	Note on the WTO and Trade in Natural Resources	504
§ IV.	MULTILATERAL ENVIRONMENTAL AGREEMENTS AND THE TRADE LAWS	506
	<i>United Nations Environment Programme Trade-Related Measures in Multilateral Trade Agreements</i>	506

Table of Contents

	Notes and Questions	527
§ V.	CLIMATE CHANGE, RENEWABLE ENERGY, AND GREEN TECHNOLOGY	528
A.	Price and Market Mechanisms	529
	<i>Trade and Climate Change a Report by the United Nations</i>	
	<i>Environmental Programme and the World Trade Organization</i>	530
	Notes and Questions	534
	<i>Annex I Illustrative List of Export Subsidies</i>	535
	<i>Annex II Guidelines on Consumption of Inputs in the Production</i>	
	<i>Process</i>	536
B.	Financial Mechanisms to Promote Renewable Energy and Green Technology	537
	<i>Trade and Climate Change: A Report by the United Nations</i>	
	<i>Environmental Programme and the World Trade Organization</i>	537
	<i>Canada — Certain Measures Affecting Renewable Energy Generation</i>	
	<i>Sector/Canada — Measures Relating to the Feed-in Tariff Program</i>	
	<i>Report of the Panel</i>	540
	Notes and Questions	554
C.	Technical Requirements to Promote the Use of Climate Friendly Products and Green Technology	555
	<i>Trade and Climate Change: A Report by the United Nations</i>	
	<i>Environmental Programme and the World Trade Organization</i>	556
	Notes and Questions	562
	Problem 5-2 State Z Adopts Technical Regulations Mandating Energy Efficient Products	565
	Problem 5-3 State Y Adopts Comprehensive Energy Labeling Requirements	566
§ VI.	HAZARDOUS SUBSTANCES AND WASTES	566
A.	Hazardous Products and the Multilateral Trading System	567
	<i>European Communities — Measures Affecting Asbestos and Asbestos-Containing Products Report of the Appellate Body</i>	567
	Notes and Questions	580
B.	Hazardous Chemicals	581
1.	The Rotterdam Convention	581
2.	The Stockholm Convention	582
	Notes and Questions	582
	Problem 5-4 State B Enacts A Ban and Restrictions on the Export of Certain Chemicals	583
C.	Hazardous Waste Management	583
1.	The Basel Convention	583
2.	The Ban Amendment	585
3.	Liability for Damages	585

Table of Contents

4.	Regional and Bilateral Agreements	586
5.	Waste Prevention, Minimization, and Recovery	586
6.	Compliance	587
	Problem 5-5 State A Seeks a Profit from Disposing of Hazardous Wastes	587
	<i>Compliance Mechanism of the Basel Convention</i>	587
	Problem 5-6 State M Seeks to Vindicate its Right to Free Trade in Hazardous Wastes Under the WTO Agreements	591
	Notes and Questions	591
	<i>Brazil-Measures Affecting Imports of Retreaded Tyres Report of the Appellate Body</i>	594
	Notes and Questions	603
D.	Nuclear and Radioactive Substances	603
	<i>International Atomic Energy Agency, Code of Practice on the International Transboundary Movement of Radioactive Waste</i>	605
	Notes and Questions	607
	Note on Liability for Nuclear Damage	607
§ VII.	FOOD SAFETY, BIOTECHNOLOGY, AND ENVIRONMENTAL PROTECTION	609
	Problem 5-7 State A Takes Action to Protect Human Health and Ecosystems	609
A.	National Regulation of Food Safety	610
B.	Criteria Governing International Trade in Food and Associated Products	613
	<i>World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures</i>	613
	<i>European Communities Measures Concerning Meat and Meat Products (Hormones)</i>	615
	Notes and Questions	638
	Note on Labeling GM Foods	640
§ VIII.	INTERNATIONAL INVESTMENT LAW AND THE ENVIRONMENT	644
	<i>Metalclad Corporation v. The United Mexican States</i>	644
	Notes and Questions	655
Chapter 6	FRESHWATER RESOURCES	657
§ I.	INTRODUCTION	657
§ II.	WATER AS A HUMAN RIGHT	658
	<i>International Covenant on Economic, Social and Cultural Rights</i>	658
	<i>General Comment No. 15 (2002), Committee on Economic, Social and Cultural Rights</i>	659

Table of Contents

	<i>Plan of Implementation of the World Summit on Sustainable Development, Report of the World Summit on Sustainable Development</i>	664
	Notes and Questions	664
§ III.	SHARED WATER RESOURCES	665
A.	International Law Rules on Shared Watercourses	665
1.	Cases	665
	<i>Affaire Du Lac Lanoux (France v. Spain)</i>	667
	<i>Case Concerning the Gabčíkovo-Nagymaros Project (Hungary v. Slovakia)</i>	678
	<i>Case Concerning Pulp Mills on the River Uruguay Argentina v. Uruguay</i>	685
	Notes and Questions	693
2.	Codifications of International Shared Watercourses Law	693
	Problem 6-1 Turkey, Syria, and Iraq Spar over the Tigris and Euphrates Rivers	696
	<i>Colorado v. New Mexico (“Vermejo I”)</i>	699
	<i>Colorado v. New Mexico (“Vermejo II”)</i>	704
	Notes and Questions	711
	Note on Dams and Development	714
	<i>World Commission on Dams</i>	714
3.	The United States-Mexico Water Sharing Agreement	717
a.	The 1944 Agreement	717
b.	The Salinity Crisis	719
	<i>Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River (English Text of Minute 242)</i>	720
c.	Mexico’s Water Debt	723
	<i>United States Allocation of Rio Grande Waters During the Last Year of the Current Cycle (English Text of Minute 308)</i>	723
d.	Environmental Flows for the Colorado River Delta	727
	<i>Interim International Cooperative Measures in the Colorado River Basin Through 2017 and Extension of Minute 318 Cooperative Measures to Address the Continued Effects of the April 2010 Earthquake in the Mexicali Valley, Baja California (Minute 319)</i>	728
e.	Evaluating the 1944 Treaty Regime	746
B.	Transboundary Groundwater	746
	<i>United Nations Economic Commission for Europe Draft Model Provisions on Transboundary Aquifers</i>	747
	Notes and Questions	749

Table of Contents

	Problem 6-2 The Santa Cruz and the San Pedro Watersheds Between the United States and Mexico	750
	<i>United States-Mexico Transboundary Aquifer Assessment Act</i>	751
	Questions	753
§ IV.	WATER TRADE AND INTERBASIN WATER TRANSFERS	754
	<i>Export of Bulk Water From Newfoundland and Labrador Report of the Ministerial Committee Examining the Export of Bulk Water</i>	756
	Notes and Questions	763
Chapter 7	PROTECTION OF THE MARINE ENVIRONMENT . . .	765
§ I.	THE MARINE ENVIRONMENT AND THE LAW OF THE SEA	765
A.	The UNCLOS “Constitution” for the Law of the Sea	765
B.	The Status of UNCLOS in United States Law	770
	Questions	771
C.	UNCLOS Part XII: Protection and Preservation of the Marine Environment	771
D.	Dispute Settlement Under UNCLOS	773
	Problem 7-1 A Dispute Between Neighboring States Over Marine Pollution	776
	Problem 7-2 A Dispute Between Neighboring States Over Fishing .	776
§ II.	THE PRINCIPAL INTERNATIONAL ORGANIZATIONS INVOLVED IN PROTECTING THE MARINE ENVIRONMENT	776
A.	The International Maritime Organization (IMO)	777
	Note on the Work and Workings of the International Maritime Organization	779
	Problem 7-3 Adopting A New IMO Standard	780
B.	The United Nations Environment Program (UNEP) and the Regional Seas Programmes	781
	Note	783
§ III.	LAND-BASED MARINE POLLUTION AND INTERNATIONAL LAW	784
	On the Prevention and Elimination of Pollution from Land-Based Sources	787
	<i>The Mox Plant Case (Ireland v. United Kingdom)</i>	789
	Notes and Questions	795
	Problem 7-4 Non-Point Pollution in the South China Sea	796
	Notes and Questions	797
§ IV.	PROTECTION OF THE ENVIRONMENT OF THE “AREA”	800
	Problem 7-5 Mining the Riches of the Sea	804
	<i>Content of the Environmental Impact Statement</i>	806
	Note	816

Table of Contents

	<i>Responsibilities and Obligations of States Sponsoring Persons and Entities With Respect to Activities in the Area</i>	816
	Notes and Questions	833
§ V.	OPERATIONAL SHIP POLLUTION	834
	<i>Annex I: Prevention of Pollution By Oil</i>	834
	<i>Annex II: Control of Pollution by Noxious Liquid Substances</i>	836
	<i>Annex III: Prevention of Pollution by Harmful Substances in Packaged Form</i>	837
	<i>Annex IV: Prevention of Pollution by Sewage from Ships</i>	837
	<i>Annex V: Prevention of Pollution by Garbage From Ships</i>	837
	<i>Annex VI: Prevention of Air Pollution from Ships</i>	837
	<i>International Maritime Organization</i>	838
	<i>United States Environmental Protection Agency Office of Transportation and Air Quality, International Maritime Organization Adopts Program to Control Air Emissions from Oceangoing Vessels (OGVS)</i>	842
	Problem 7-6 Enforcing Marpol Ship Pollution Standards	845
	Note	845
	<i>United States v. Peña</i>	846
	Notes and Questions	855
§ VI.	OCEAN DUMPING	860
	<i>1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972</i>	861
	Notes and Questions	864
	Problem 7-7 Storing Carbon Dioxide Under the Seabed to Combat Climate Change	865
§ VII.	MARINE CASUALTIES AND LIABILITY FOR DAMAGES	866
	Problem 7-8 An International Oil Tanker Casualty	867
	<i>International Convention on Civil Liability for Oil Pollution Damage (CLC)</i>	870
	<i>International Convention on the Establishment of an International Fund for Compensation for oil Pollution Damage</i>	872
	Notes and Questions	875
	Note on Collateral Actions to Overcome Limits under the International Liability Regimes	877
	<i>In Re Oil Spill by the Oil Rig Deepwater Horizon</i>	886
	Note	899
	Notes and Questions	899
	Notes on Natural Resource Damages	903
§ VIII.	MARINE FISHERIES	907
A.	Fishery Resources	907
B.	UNCLOS Provisions	908

Table of Contents

C.	National Fisheries Management Systems	909
	Problem 7-9 Fishery Mismanagement in the Exclusive Economic Zone	911
D.	High Seas Fisheries	912
1.	UNCLOS provisions and Supplemental Fisheries Agreements	912
	Note on International Agreements Governing Driftnet Fishing on the High Seas	914
2.	Regional Fisheries Management Organizations (RFMOs)	916
E.	Straddling Fish Stocks	917
	Problem 7-10 The Case of the <i>Estai</i>	918
	Problem 7-11 The Swordfish Dispute European Union (EU) v. Chile International Tribunal for the Law of the Sea Dispute No. 7	919
	Problem 7-12 The Case of the Bering Sea Doughnut Hole	920
	Note on the Impact of the 1995 Fish Stocks Agreement on the Management of Straddling Stocks	921
	Problem 7-13 Managing the Doughnut Hole Agreement	921
F.	Highly Migratory Species of Fish.	923
	<i>Southern Blue Fin Tuna Cases New Zealand v. Japan;</i> <i>Australia v. Japan</i>	923
	<i>Southern Bluefin Tuna Cases new Zealand v. Japan</i> <i>Australia v. Japan</i>	930
	Notes and Questions	935
§ IX.	WHALES AND MARINE MAMMALS	936
	Note on the International Convention for the Regulation of Whaling (1946)	937
	<i>Institute of Cetacean Research v. Sea Shepherd Conservation Society</i> .	938
	Note and Question	944
	<i>Dispute Concerning Japan's Jarpa II Program of "Scientific Whaling"</i> <i>(Australia v. Japan)</i>	944
	Notes and Questions	951
	Notes on the Outcome of the Jarpa II Whaling Case	955
§ X.	MARINE ECOSYSTEMS, BIODIVERSITY, AND MARINE PROTECTED AREAS	956
	Problem 7-14 Designating Marine Protected Areas	958
	<i>Assembly of the International Maritime Organization Resolution</i> <i>A.982(24)</i>	960
	Notes and Questions	968
Chapter 8	BIOLOGICAL DIVERSITY	971
§ I.	INTRODUCTION	971
A.	The Meaning of Biological Diversity	971

Table of Contents

B.	Measurement of Biological Diversity	974
	Notes and Questions	976
C.	The Importance of Biological Diversity	977
	Notes and Questions	979
D.	Threats to Biological Diversity and Causes of Loss	981
	Notes and Questions	981
§ II.	THE UNITED NATIONS CONVENTION ON BIOLOGICAL DIVERSITY	982
A.	Introduction	982
	Problem 8-1 Analysis of the Uncbd: Should the United States Become a Party?	983
B.	Conservation of Biological Diversity	984
	Problem 8-2 United States Implementation of a Policy to Conserve Biodiversity	985
	<i>Australia's Biodiversity Conservation Strategy Executive Summary</i> .	985
	<i>The European Union's Biological Diversity Strategy, European Parliament Resolution of 20 April 2012</i>	988
	Notes and Questions	994
	Problem 8-3 The Danube Delta Case	995
1.	A Comprehensive/Integrative (C&I) Strategy to Conserve Biological Diversity	997
2.	A "Hot Spots" Strategy	997
3.	Strategic Habitat Preservation	998
C.	Access to Genetic Resources and Benefit Sharing	999
1.	The Provisions of the UNCBD	999
2.	The Nagoya Protocol	1000
3.	Traditional Knowledge	1001
	Problem 8-4 Biotechnology in Brazil	1001
4.	Marine Biodiversity and Genetic Resources	1003
D.	Financing the Convention on Biological Diversity's Work	1003
E.	Biosafety	1004
	Problem 8-5 The International Grain Trade Coalition Wrestles with Biosafety	1006
§ III.	PROTECTION OF SPECIES DIVERSITY	1008
A.	Treaties to Conserve or Protect Migratory Birds and Other Species . .	1008
B.	The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	1008
1.	How CITES Works	1008
	Notes and Questions	1010
2.	Sustainable Use Issues	1013
3.	Implementation and Enforcement	1014
	Problem 8-6 Protecting Elephants	1015

Table of Contents

	Problem 8-7 Protecting Polar Bears	1016
§ IV.	PROTECTION OF ECOSYSTEMS	1017
A.	Wetlands	1017
	<i>Convention on Wetlands of International Importance Especially as</i>	
	<i>Waterfowl Habitat</i>	1018
	Notes and Questions	1019
B.	Forests	1019
C.	World Heritage	1021
§ V.	COMBATTING DESERTIFICATION	1022
A.	The Desertification Convention	1023
B.	How Can Desertification Be Prevented or Reversed?	1023
	<i>Combating Desertification and Land Degradation: Proven Practices</i>	
	<i>from Asia and the Pacific</i>	1024
C.	Implementation of the UNCCD	1026
	<i>United Nations Convention to Combat Desertification</i>	1026
	Problem 8-6 Formulating A National Action Plan (NAP)	1030
Chapter 9	THE POLAR REGIONS	1031
§ I.	ANTARCTICA	1031
A.	Introduction	1031
1.	Geography and Climate	1032
2.	Population	1033
3.	Environmental Concerns	1033
a)	Ozone Depletion and Climate Change	1033
b)	A Melting Ice Shelf	1034
c)	Krill	1034
B.	The Antarctic Treaty System: Security, Peace and Preservation of	
	Sovereign Claims	1035
1.	The Antarctic Treaty	1035
	Notes and Questions	1037
2.	Antarctic Treaty Consultative Parties and Consultative Meetings . .	1038
	<i>The Antarctic Treaty</i>	1038
	Notes	1039
	Questions	1040
	Problem 9-1 Australia Enforces Environmental Restrictions in its	
	Antarctic Territory	1041
C.	Scientific Research, Environmental Stewardship and Species	
	Protection	1042
	Notes and Questions	1043
1.	Convention for the Conservation of Antarctic Seals	1046
2.	Convention on the Conservation of Antarctic Marine Living Resources	

Table of Contents

	(CCAMLR)	1047
	Notes and Questions	1048
	Problem 9-2 Management and Enforcement Problems in the Southern Ocean	1050
	<i>A Proposal for the Ross Sea Region Marine Protection Area</i> <i>Delegation of the United States</i>	1052
3.	Protocol on Environmental Protection (The Madrid Protocol)	1055
	Notes and Questions	1057
D.	Mineral Resource Regulation	1058
	Notes and Questions	1059
E.	Oil Spills and Waste Management	1060
	Notes	1062
F.	Regulation of Tourism	1063
	Notes and Questions	1065
	Problem 9-3 Visiting Antarctica	1065
§ II.	THE ARCTIC	1067
A.	Overview	1067
B.	The Arctic Legal Regime	1069
1.	Regulation of Arctic Waters	1070
2.	The Ilulissat Declaration	1071
	The Ilulissat Declaration	1072
3.	The Arctic Environmental Protection Strategy and the Arctic Council	1073
	<i>The Rovaniemi Declaration on the Protection of the Arctic</i> <i>Environment</i>	1073
	Note on the Arctic Environmental Protection Strategy	1075
	Questions	1077
C.	Arctic Marine Life and Fisheries	1077
1.	The Central Arctic Ocean “Doughnut Hole”	1078
2.	The Bering Sea “Doughnut Hole”	1079
	Notes and Questions	1080
D.	The Kiruna Declaration	1081
	Kiruna Declaration	1081
	Notes and Questions	1086
Chapter 10	THE ENVIRONMENTAL RESPONSIBILITY OF NON- STATE ACTORS	1087
§ I.	INTERNATIONAL ORGANIZATIONS	1087
A.	Introduction	1087
B.	The Example of the World Bank	1088
	<i>The World Bank Inspection Panel Process</i>	1089

Table of Contents

	Problem 10-1 The Lake Titicaca (Bolivia) to Puerto Maldonado (Peru)	
	Highway	1090
	<i>World Bank Inspection Panel, Rondônia Natural Resources</i>	
	<i>Management Project</i>	1093
	<i>World Bank Inspection Panel, Report on Progress Review of</i>	
	<i>Implementation of Brazil: Rondônia Natural Resources Management</i>	
	<i>Project</i>	1095
	Notes and Questions	1096
C.	The Environmental Liability of International Organizations	1099
§ II.	NON-GOVERNMENTAL ORGANIZATIONS (NGOs)	1100
	Question	1100
	Notes	1101
§ III.	BUSINESS AND INDUSTRY	1105
A.	Codes of Conduct and Environmental Management Systems	1105
	<i>Agenda 21, Report of the United Nations Conference on Environment</i>	
	<i>and Development</i>	1105
	Notes	1106
B.	Enforcing Code of Conduct Norms	1111
	<i>OECD, Procedural Guidance</i>	1111
	<i>Revised Final Statement on Complaint Concerning Oil Multinational</i>	
	<i>BP Under OECD Guidelines for Multinational Enterprises</i>	1115
	Notes and Questions	1120
C.	Environmental Liability	1121
	Problem 10-2 A Chemical Plant Explosion	1121
1.	Liability under International Law	1121
2.	Liability Under the Home State or Host State Laws	1122
	<i>In Re Union Carbide Corp. Gas Plant Disaster</i>	1122
	Note on the Bhopal Settlement and its Tortuous Aftermath	1125
	Notes and Questions	1127
	<i>Kiobel v. Royal Dutch Petroleum Company</i>	1128
	Notes and Questions	1130
Table of Cases		TC-1
Index		I-1
